Paper-Making Machinery

The Bagley & Sewall Co.
Watertown, New York. U.S.A.

Landes-Bibliothek
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THE

BAGLEY AND SEWALL COMPANY

WATERTOWN, N. Y.
U. S. A.

BUILDERS OF

MACHINERY FOR PAPER AND PULP MILLS

OUR AIM:
"TO BUILD THE BEST AND NOT THE CHEAPEST."

CATALOG 1905

FOUNDED 1853

INCORPORATED 1883

The Cover of this Catalog was made on one of our Special Machines.

OUR FOREIGN AGENTS.

FOR NORWAY, SWEDEN AND FINLAND,

The Aktiebolaget Goteborgs Maskinaffar,
Gothenberg, Sweden.

FOR FRANCE, BELGIUM AND HOLLAND,

Messrs. Lammleth and Cornet,
Paris, France, No. 7 Boulevard St. Denis.
Antwerp, Belgium, No. 26 Rue Leys.

FOR CANADA,

Our Grinders and Wet Machines are Built under our License in Canada,
From our drawings and under our instruction, by

Carrier, Laine & Company,
Levis, Quebec.

CATALOG 1905

FIFTY-SECOND YEAR.

"FOREWORD."

We issued last year a catalog illustrating and describing a portion of our machinery used in the production of pulp and paper. Its cordial reception and satisfactory results encourage us to place this more complete catalog before our customers and friends, hoping that the illustrations of modern paper and pulp making machinery may prove interesting and instructive to them, and profitable to us.

THE BAGLEY & SEWALL COMPANY.

Watertown, N. Y.

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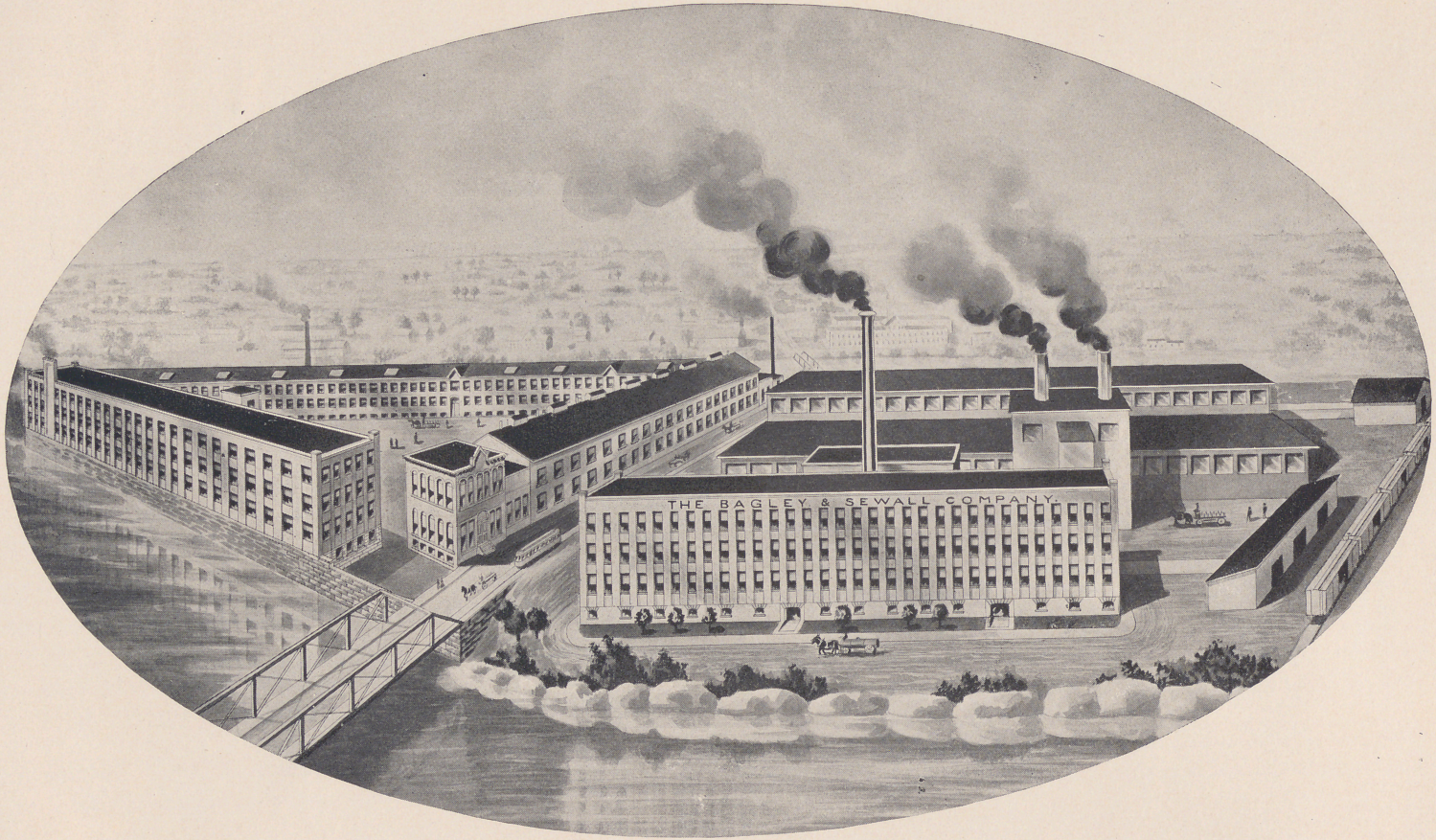


Office and Factories, Watertown, New York, U. S. A.

OUR PAPER MAKING MACHINERY THE FASTEST AND MOST PRODUCTIVE IN THE WORLD.

Located in the midst of a paper manufacturing region, whose daily output is 900 tons of finished paper, exceptional opportunities have been afforded us for studying the necessities of the paper manufacturer. The daily intercourse with the owners and operators of paper making machinery, and daily discussions with them concerning details and improvements, have enabled us to build and embody in our paper making machines the happiest combination of practice and theory, and have made it possible for us to build the most productive machines running in the world.

VISITORS WELCOME.

We are always glad to have our customers and friends visit us and inspect our factories, which are thoroughly equipped with modern machine tools. We use compressed air and electricity at every point for lifting and handling work, and are prepared to construct our machinery in the best manner, and according to the most modern practice. While making such a visit, after inspecting how we build, we can show the visitor our machines, located near us, making paper at speeds from 500 to 585 feet per minute.

We will build paper machines of any size, of any arrangement of parts, for any quality of paper, and for any quantity of paper.

The largest machines in the world are the four machines in the new plant of the Berlin Mills Co., Berlin, N. H. They are 164″ wide, built by us. The next largest machine is the 163″ machine at the Remington-Martin Co., also built by us, and we build them down to 80″, or less, in width. Our machines are making writing, book, newspaper, manillas, boards, kraft-papers, and tissue papers, and all the varieties akin to the above papers, and we are prepared to construct such machines after proper designs, and with the best skill, workmanship and materials.

It is almost impossible to discuss or illustrate within the covers of a catalog the thousands of component parts of one of our paper machines. Only a few can be illustrated and described, and in the following pages, the subject must necessarily be han-

dled in a general manner, but we will be pleased to go into further detail by correspondence or by personal interviews, or preferably by having those interested visit our factories, and at the same time see our machines in operation. We should also be pleased to submit specifications and estimates to responsible parties.

REMODELING AND REBUILDING OLD PAPER MACHINES.

Remodeling of old paper machines, by the addition of dryers, new Fourdriniers, new press parts, new driving arrangements, calenders, reels, slitters, winders, etc., bringing them up as nearly as possible to the productions of machines constructed by us at the present time, becomes more and more a necessity. The steadily increasing production of our new machines makes it manifestly unsatisfactory for an established manufacturer with machines eight and ten years old, to compete against a business rival situated with similar natural surroundings, but with mills equipped with machines built recently. For instance, ten years ago a machine 112″ wide, making 100″ of finished paper, did well to make 15 tons of news paper daily, whereas today we have a machine 112″ in width, averaging on news paper, week in and week out, above 31 tons daily, an increase of more than 100 per cent. in production, with scarcely any increased labor cost.

We are prepared to remodel old machines, vastly increasing their output and efficiency, and will do this work with the least possible "shut-down" of the mill. This remodeling applies not only to machines of our own make, but we can and do reconstruct machines of other manufacturers.

ACCESSORY PAPER MAKING MACHINERY.

We especially call the trade's attention to our reels, winders, slitters, stuff pumps and other small machines, which can be used in connection with any make of paper machine; particularly of our Warren winders, which we are placing in mills all over the world. A full description of these machines will be found in this catalog, and for trade that requires a perfectly wound roll, this machine is indispensable, and they are running on almost every class of paper, particularly news, manillas, bag and book papers.

PULP MACHINERY.

PULP GRINDERS: A full description in this catalog the reader will find of our 3-pocket and 4-pocket pulp grinders. As there are thousands of these machines in use throughout the United States and Canada, a description of same will undoubtedly be interesting, and we respectfully invite full consideration of the merits of these machines.

WET MACHINES: Our wet machines are equally well known, and both our Spring and Hydraulic types have been, in all fairness, the standard machines of the world for the last fifteen years. Both styles will be found fully described in this catalog under "Wet Machines."

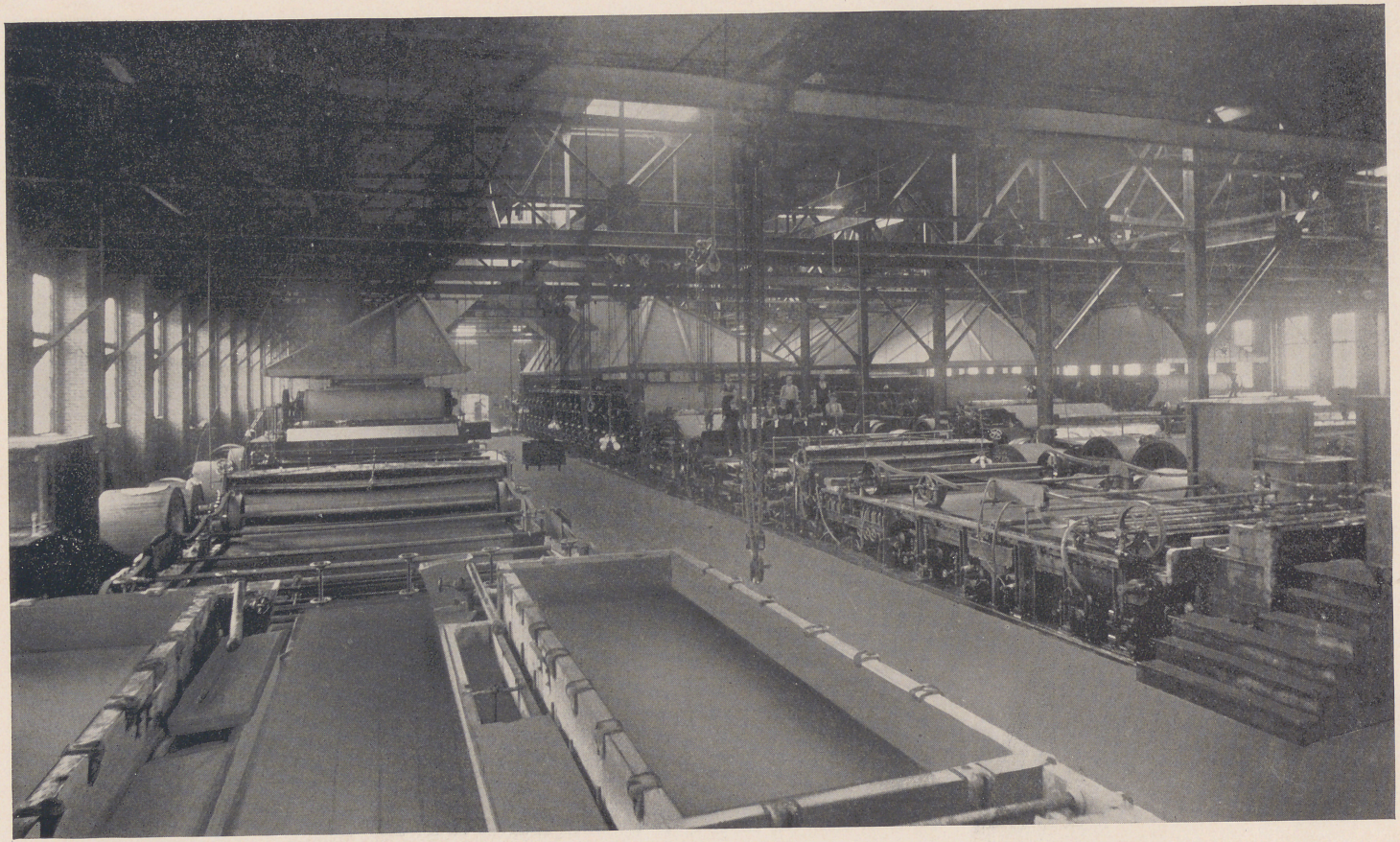
PUMPS: We have been builders of stuff pumps, centrifugal and force pumps, for a great many years, and have given this branch of our business especial attention, and offer pumps for special purposes, great care having been given to the actual needs of the many users, and the various styles of pumps having been reconstructed from time to time to better suit the exacting requirements of the trade.

TRANSMISSION MACHINERY: We manufacture solid and split pulleys of all sizes, hangers, pillow blocks, collars, couplings, gearing, and everything in connection with transmission of power in mills.

INDEX: For the greater convenience of our customers we have indexed this catalog, and we ask that a perusal of the index be given, as it will serve to show the extent of the machinery we manufacture. Pages 152 to 155.

GENERAL.

IRON FOUNDERS AND MACHINISTS: We have a complete up-to-date Foundry and Machine Shop equipment, and are prepared to make general castings from the smallest pieces up to 20,000 pounds each, and finish same as may be desired. General Machine work, Calender Roll, Press Roll and Couch Roll Grinding, Repair work of all descriptions, executed with promptness.



Four 164" "Bagley" Machines in the Mills of the Berlin Mills Company Designed and Built by The Bagley and Sewall Company.

WIDE PAPER MAKING MACHINES.

We consider that we have earned the right to ask the Paper Manufacturers of the world to entrust with us their orders for wide, fast-running machines.

We have passed the experimental stage by reason of the many wide machines we have successfully built, and we have discovered and overcome the points of difficulty which others have experienced to their sorrow, and have overcome all the difficulties that were theoretically expected.

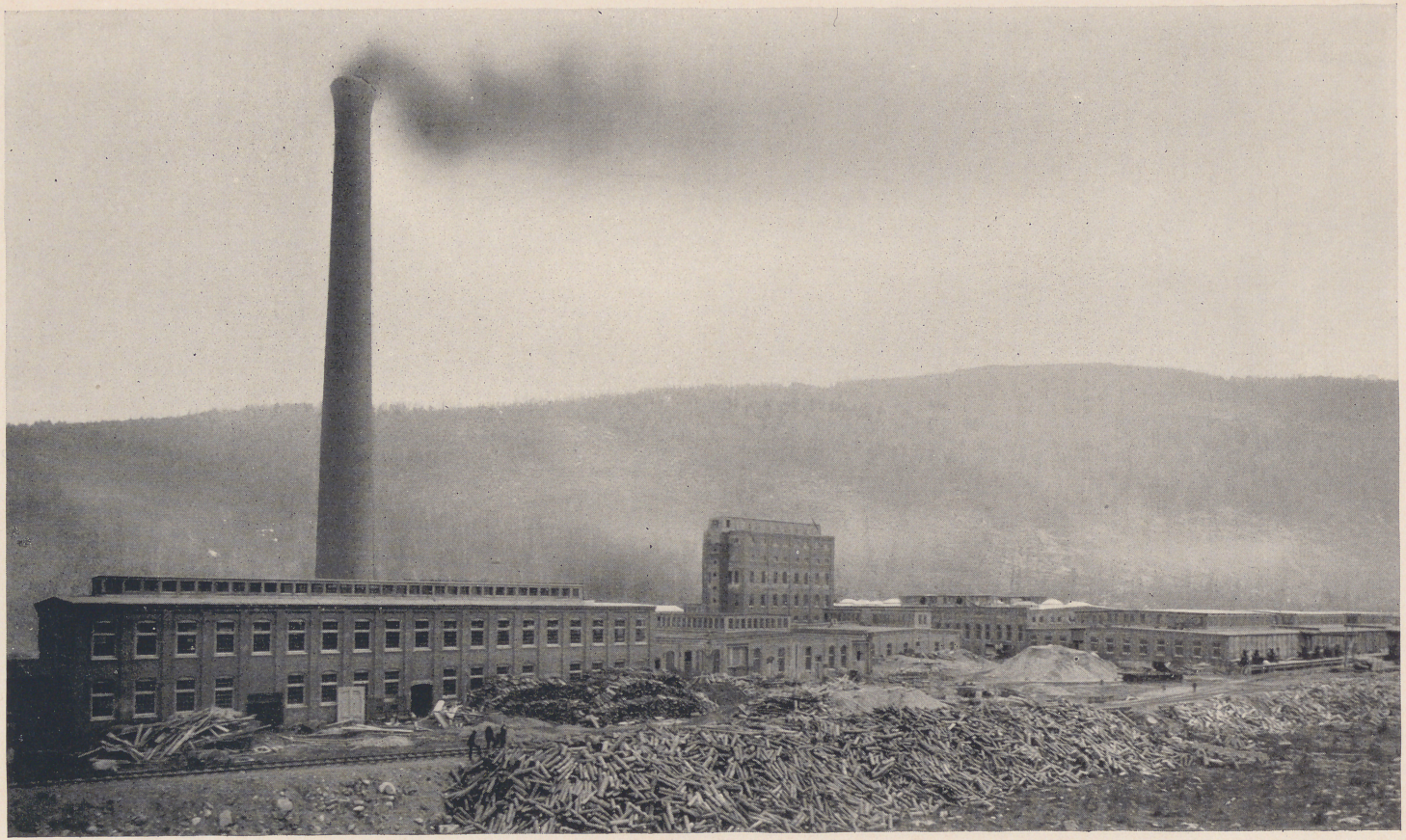
The old story of more expense on wide machines for wires, felts, belts and clothing, to say nothing of help, has all been exploded by the wonderful results obtained by the great machines we have built above 160″ in width.

All of this has been the result of careful study on our part of the actual conditions existing in the operating of the great Bagley machines in the mills.

Our machines are theoretically as nearly perfect as the world has produced, and are designed from start to finish on lines that are simple, yet in appearance beautiful to the eye. Their great value lies in the fact that they are strong, workable machines, every line and design based upon the experience of actual operation.

Four of these great Bagley machines are in the Berlin Mills Company, a very excellent picture of which is on preceding page. This mill is one of the best in the world, and cost between two and three millions of dollars, showing the class of mills we equip, and the character of the clientage we enjoy.

Opposite is a very fair photograph of the 164 inch Bagley machines at Berlin Mills Co. In the photograph they show up as handsome pieces of machinery, graceful and harmonious to the eye, but the impression gathered from the photograph is nothing to that which the visitor receives when he sees these machines actually in operation; and in the short time they have been running, three different paper manufacturers have been so delighted that they have come direct to Watertown and given us their commands for building large machines for them without the slightest competition.



Mills of the Berlin Mills Company, Berlin, New Hampshire, Containing Four 164 inch "Bagley" News Machines.

The following letter from the Berlin Mills Company, Mr. Herbert J. Brown, Treasurer, gave to us a great deal of satisfaction, and we are glad to publish it:

Portland Me., Dec. 30, 1904.

The Bagley & Sewall Company, Watertown, N. Y.

Gentlemen:

We are in receipt of your recent inquiry as to how your four 164" paper machines are running.

It gives us pleasure to be able to say in answer that they have run from the day of starting, now for about six months, without the loss of a single day's work, except Sundays and holidays, and have made a larger average daily product than we figured they would make.

Your ten wet machines have done what you claimed for them, and are entirely satisfactory to us.

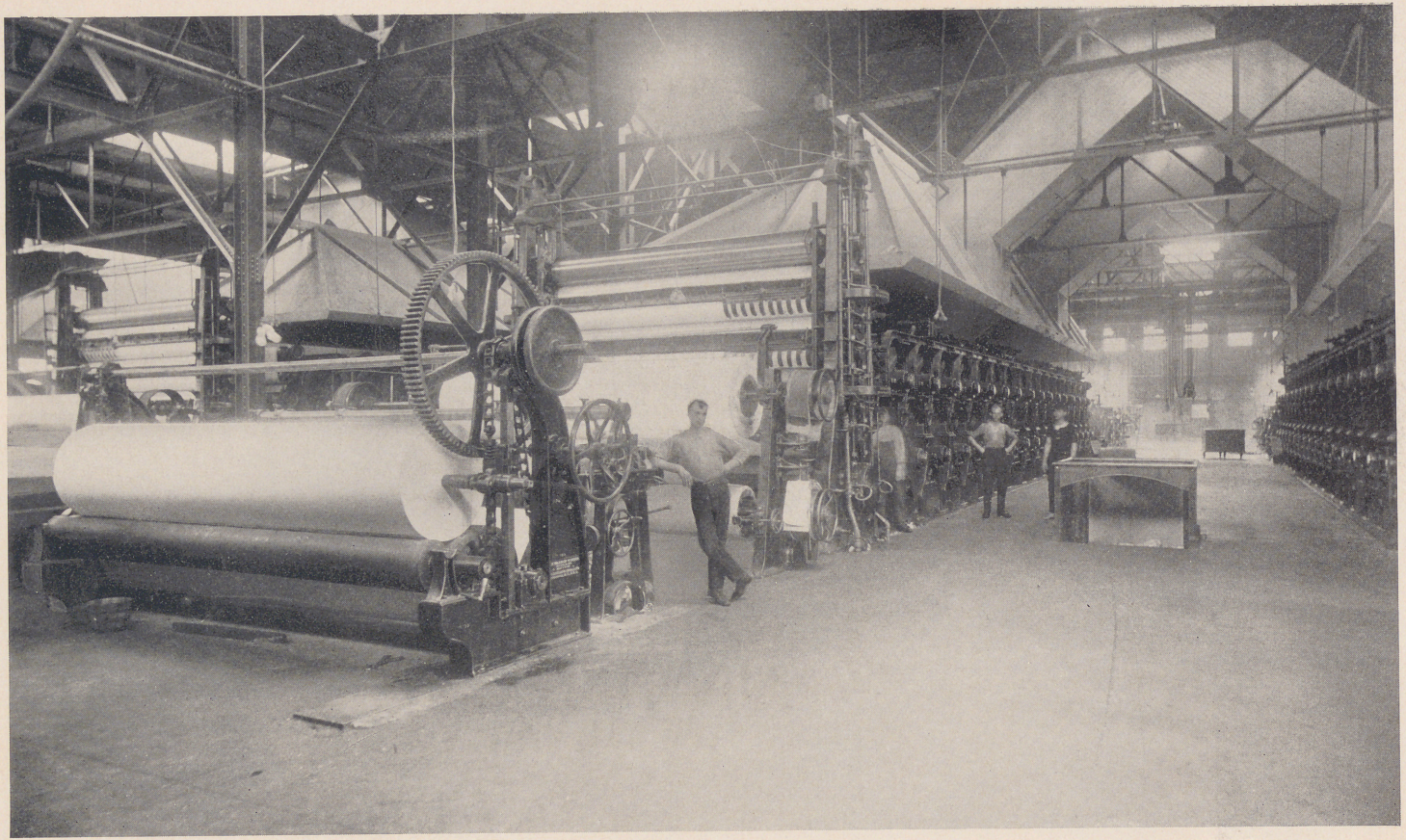
With full appreciation of the pleasant business relations we have had with you from the placing of this order to the final settlement, and wishing you the compliments of the season, we remain,

Very truly yours,

BERLIN MILLS COMPANY,

(Signed) H. J. Brown, Treas.

A very satisfactory letter, and a real pleasure to us, covering as it does between two hundred and three hundred thousand dollars of our work, into which we put much thought and energy.



164 inch "Bagley," at Berlin Mills Company. The Largest Machines Operating in the World.
Designed and Constructed by The Bagley and Sewall Company.

REALIZATION FROM EXPERIENCE.

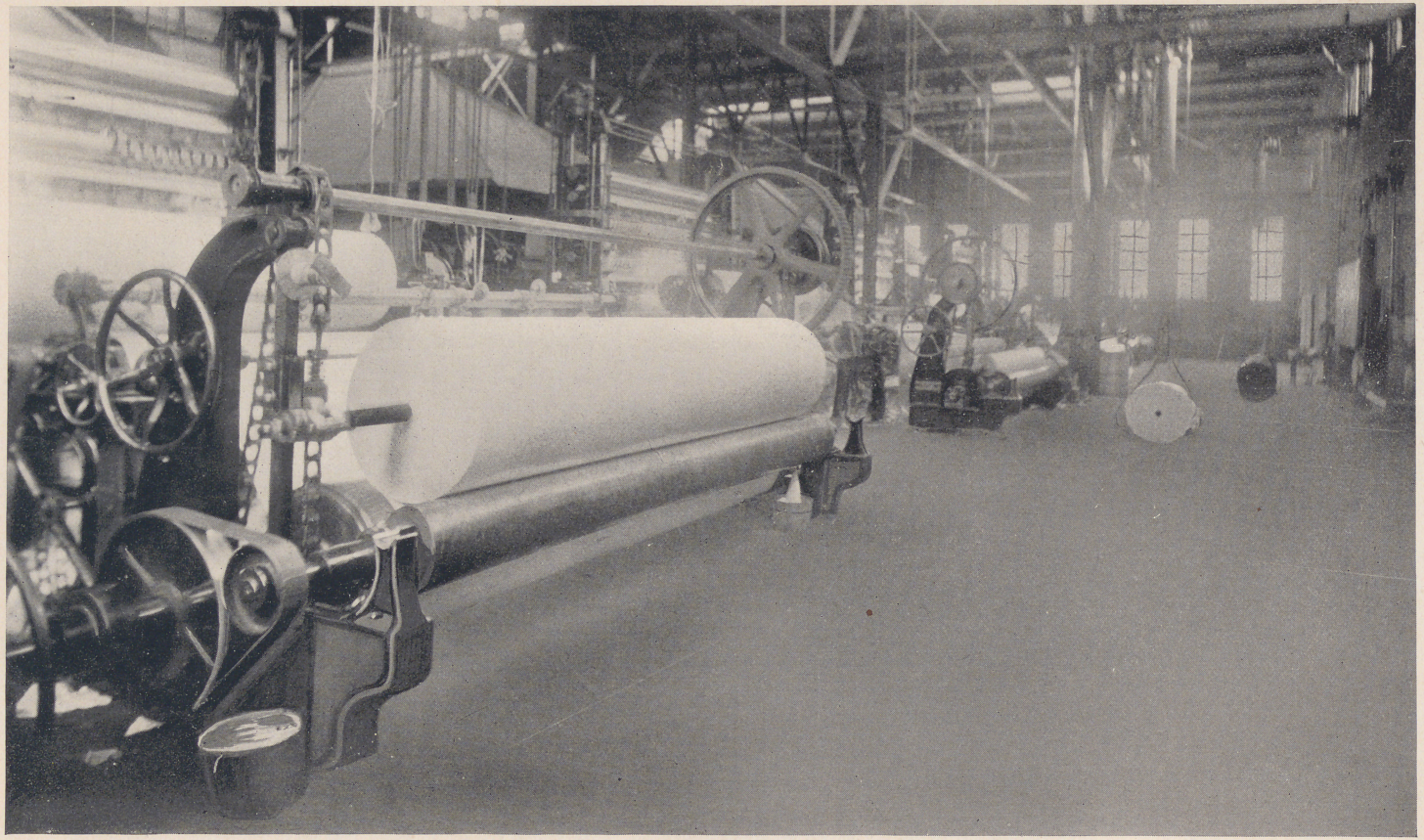
Confirmation of our statement on page 7, that our location enables us to combine theory and practice to a larger extent than any of our competitors, could not be more thoroughly given than by the wonderful results of the four great machines installed by us in the mills of the Berlin Mills Company, at Berlin, New Hampshire.

These machines have a forming wire 164″ wide, and are, therefore, the widest machines the world has produced. Each machine started off making paper without the slightest hitch. The many thousand parts comprised in the five hundred tons that each machine weighed, worked in complete harmony and unison, and with smoothness of operation seldom seen in a paper machine until it has run for months. They are above all practical machines, and the forty (40) tons daily production, each machine, is the net result, a result, however, fully 15 per cent. above the purchaser's expectations, and to state the total output of the mill as "160 tons daily from four machines," emphasizes the wonderful amount of the production.

Machines of the width of 164″ cannot be produced without a world of experience, and that is just what we possess. Before these, we built a machine 163″ wide, for the Remington-Martin Company, which was the largest machine in the world until these 164″ were built, together with our experience on the 160″ machines intended for the White Mountain Paper Company. In fact, of the total of eleven (11) machines ordered in the world 160″ wide and over, ten (10) have been built by us.

The many delicate proportions to secure strength, stiffness, and longevity, and at the same time to construct so that the power required should not be excessive, can only be from the result of experience. The scale of proportions that exists between machines 100″ wide and those 130″ wide, cannot be extended proportionately to machines 164″ wide, and those points and features have been our constant care and thought.

Actually constructing the ten largest machines in the world, has been a good experience for us, and removes us entirely from the class of experimental builders of wide machines.



164 inch "Bagleys" at Berlin Mills Co. Showing Warren Winders in Operation. Designed and Built by The Bagley and Sewall Co.

LARGEST PRODUCTION OF NEWS PAPER IN A SINGLE DAY.

It is interesting to know that the first machine that started at Berlin Mills made the first day 80,000 pounds of finished shipping rolls, and that the maximum amount produced by one machine of shipping rolls in a single day is 94,500 pounds, or 47¼ tons.

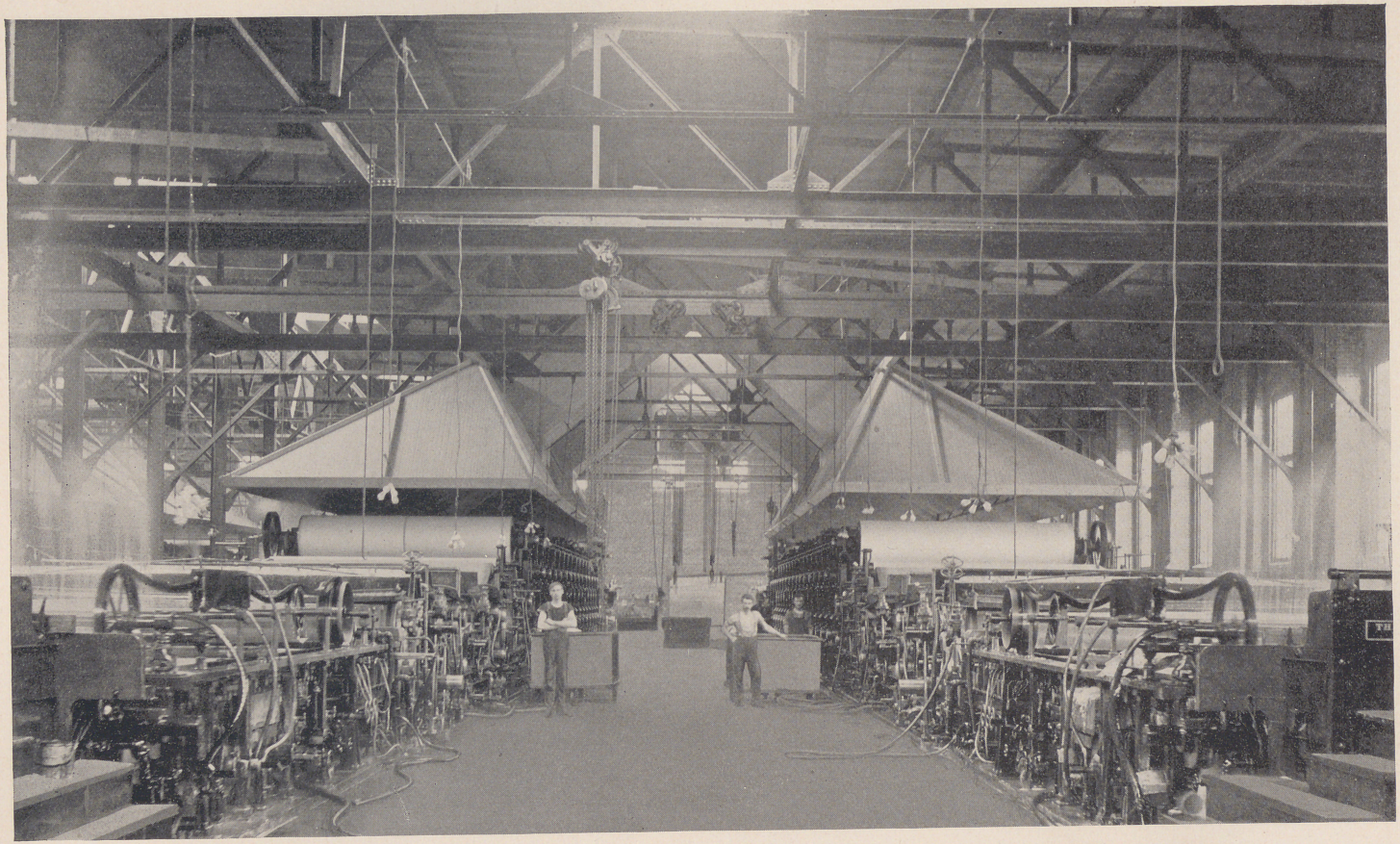
THE FINISHING END---THE WARREN DOUBLE DRUM WINDER.

One of the features of our development of wide, fast running machines has been our ability to take care of the paper, and put it in perfect shipping rolls as fast as it was made. This the Patent Warren Winder, built exclusively by us, has accomplished, and the pictures of these Berlin Mills machines show the beautiful rolls being wound the full width of the winder.

As is well known, as a machine is increased in width, the diameter of the winding shaft and cores through the rolls must remain the same. The Warren will wind paper of any width into any size roll perfectly, regardless of the diameter of the shafts, as the paper does not depend at all upon the shaft for its support, but lies wholly upon the supporting surfaces of the corrugated drums, and a dozen rolls can be wound on the same shaft at the same time, without their running together.

This winder applies equally well, and is as necessary, on narrow as on wide machines, and on Book, Manillas and Bag, as well as on News Paper.

Details and cuts pages 50 to 53.



Two Fourdriniers, 164″ Wide, at Berlin Mills Co. Designed and Constructed by The Bagley and Sewall Co.

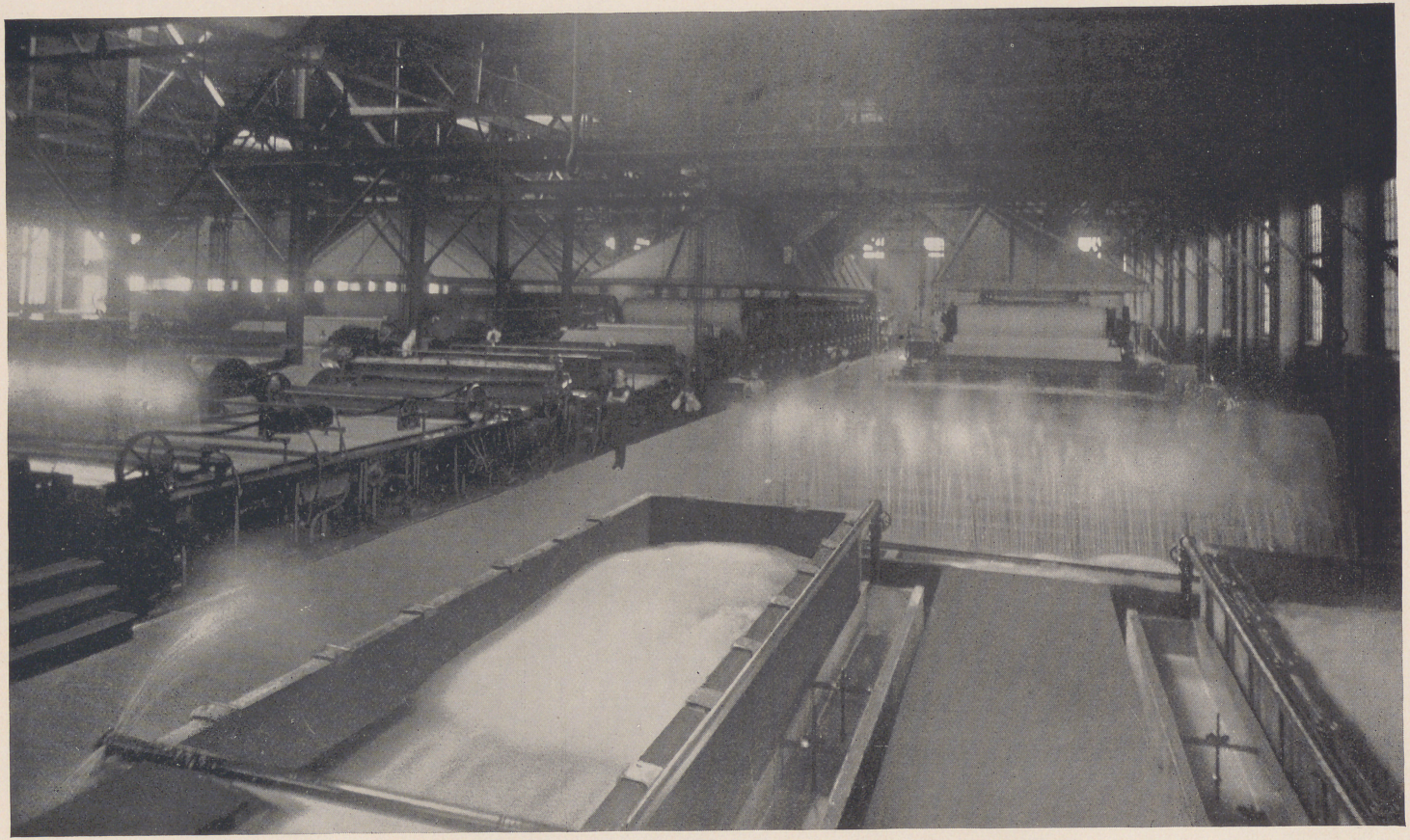
APPROVAL OF EUROPE.

Three of these great Bagley machines have been booked by us during the past few months for export to Europe, and will be erected by us as soon as the purchasers can prepare their buildings.

One of these machines has just been shipped by us to the Aktieselskabet Holmen-Hellefos, of Drammen, Norway, and our Engineer is starting to erect same. This machine is 160 inches wide, and we will send skilled machine tenders to assist in starting of same. This machine will be used on news for shipment to the English market, and will be observed closely by all the paper making interest of Europe, and we feel already well satisfied that the results will more than justify the confidence placed in us by Mr. Victor Mohn, the Managing Director and Engineer of that Company.

The machine for Drammen was sold through our good friends and agents for Norway, Sweden and Finland, The Aktiebolaget Goteborgs Maskinaffar, of Gothenberg, Sweden.

Agents addresses in Norway, Sweden and Finland and France, Belgium, Holland, are on the 4th page.



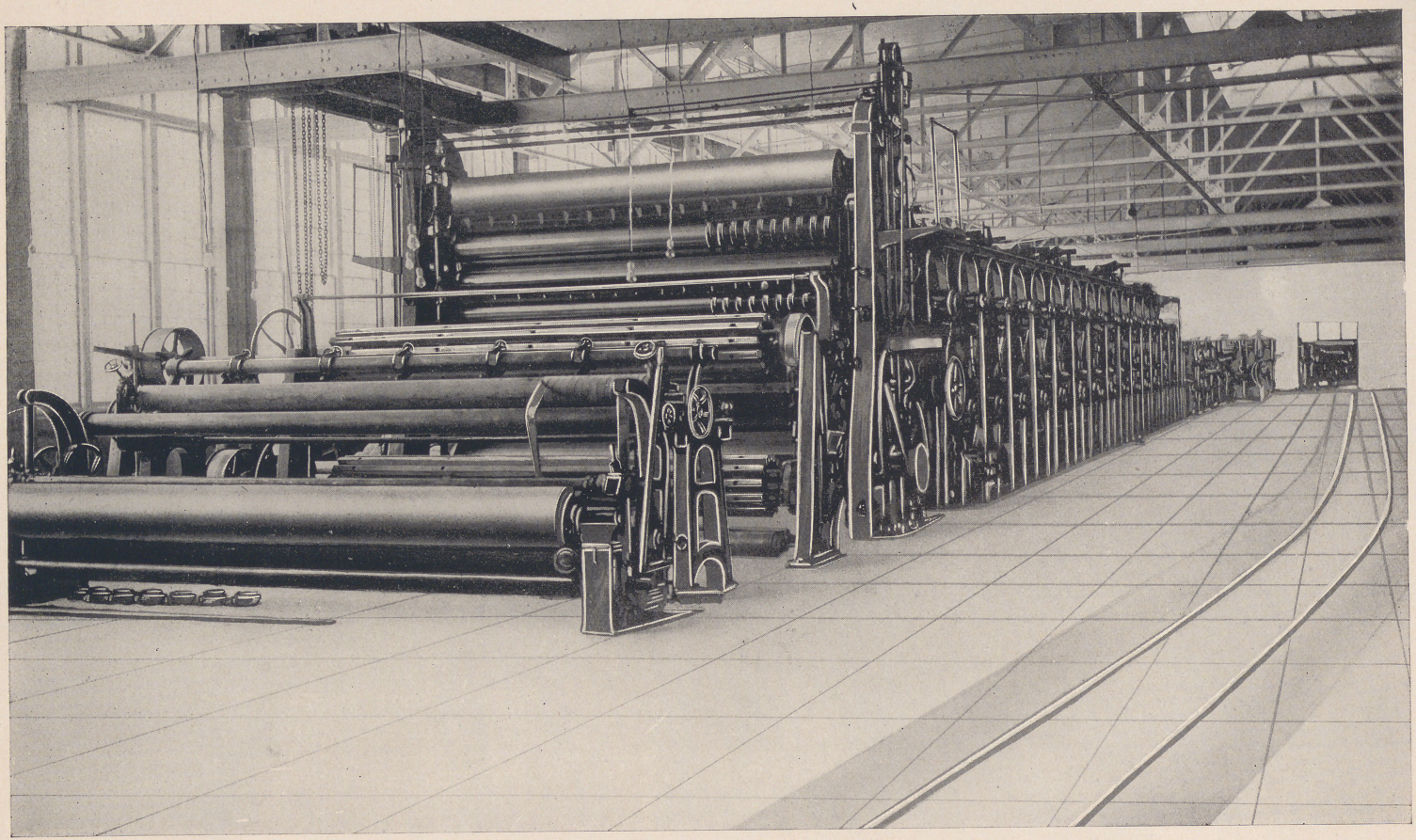
Four 164" Bagley Machines Producing 160 Tons Daily. Designed and Constructed by The Bagley and Sewall Co.

FINISHING NEWS PAPER.

In concluding the few words about these large machines at Berlin Mills, and in addition to what we said about the Warren Patent Double Drum Winder, it is interesting to note that all the paper made in this mill, 160 tons daily, is made in rolls so perfectly that no cutter has ever been used. First, the machines make the paper level and good, and the rolls on the winder are so perfectly made that there are no poor rolls to cut, saving a great pay roll of cutter room help.

ACKNOWLEDGMENT.

We wish to extend our thanks to Mr. Herbert J. Brown, Treasurer, and to Mr. W. E. Corbin, General Superintendent, of the Berlin Mills Company, and to all those directly connected, under the above gentlemen, with the operations of our machines, for the care and knowledge they have brought to bear in the successful starting and running of these great machines.



A Bagley, 163 inches Wide, at Remington-Martin Co., Norfolk. Designed and Built by The Bagley and Sewall Co.

NEWS MACHINE 163 INCHES WIDE.

On the opposite page is a photograph which fairly represents a machine of our make 163 inches wide, the first machine above 160 inches that we ever built, and in fact the widest machine in the world when it started, and the widest until the Berlin Mills Company's machines were built and erected by us.

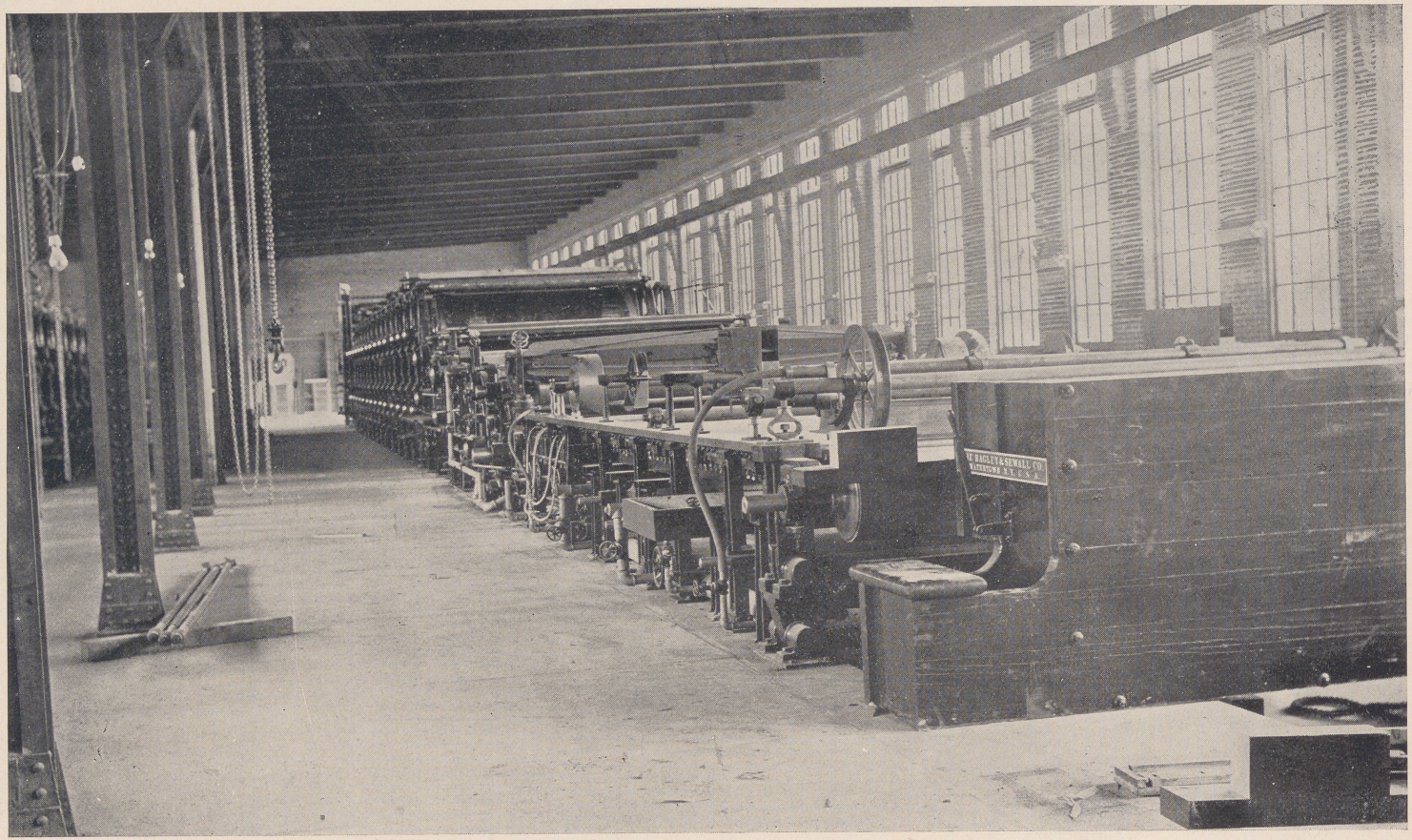
This machine has a making wire 163 inches wide, and has been in successful operation since 1902 in the Mills of the Remington-Martin Co., at Norfolk, New York.

This machine was watched and carefully studied by the paper making world, and was of such interest that we issued a souvenir edition of photographs which were sent to the paper trade of the world, illustrating the then "Largest machine running."

This monster machine started without a hitch, and made shipping rolls at once, proving, among other points, the utility and success of the Warren Double Drum Winder on this width of machine.

The drive on this machine is with two engines, one for the variable speed and one for the constant speed. The floor gearing is our nine inch face geared drive, and it is of interest to note that the proportions of same are so correct that not a single gear has been broken on the machine since it started. As this was one of the places in which much smaller machines of other makers had met with disaster, we feel well pleased.

This wide machine runs at 460 feet per minute as steadily as a machine of half its width.



A 90 inch "Bagley" at St. Regis Paper Co., Deferiets, N. Y.

THE BAGLEY AND SEWALL CO. HIGH SPEED MACHINES.

While a large portion of our work and time during the past few years has been engaged in designing and constructing wide machines, the development of machines of medium width has not been neglected, and we herewith present to our friends the photographs of a

GALAXY OF RECORD BREAKERS,

whose speeds are from 500 to 618 feet per minute on news paper.

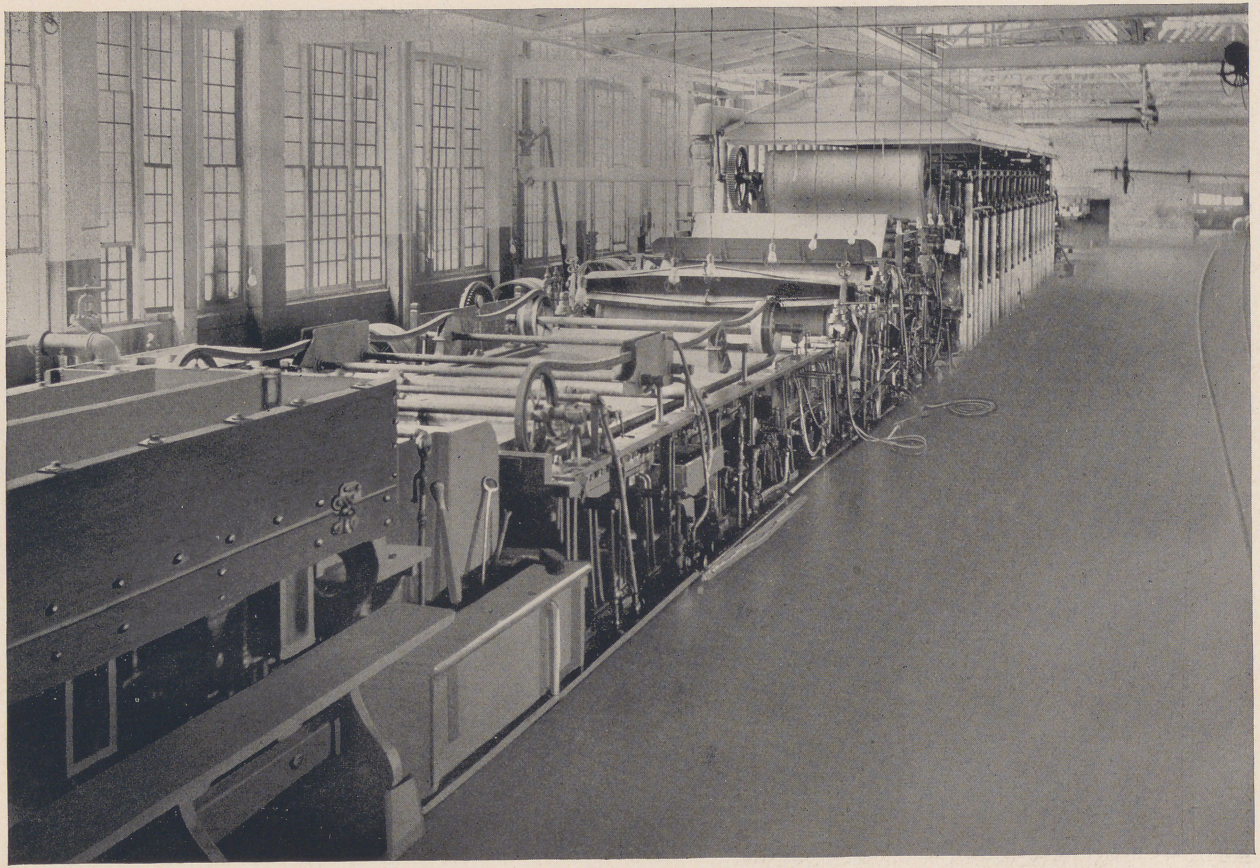
Opposite is a picture of a fast running machine at the St. Regis Paper Company, 90 inches wide, running at 525 feet per minute.

Our very first machine, built in 1889, made the record of the world at that time, of 325 feet per minute. This was at the Ontario Paper Co., now owned by the International Paper Co. People came from far and near to see it work.

In 1892 our machines at the Willamette Pulp & Paper Company made 480 feet per minute, the record of the world at that period.

In 1900 the St. Regis Paper Company produced paper continuously at 525 feet per minute on our 90 inch machine, shown opposite.

A 90 inch "Bagley" at St. Regis Paper Co., Deferiets, N. Y.



The Fastest Machine in the World—618 Feet per Minute. Designed and Constructed by The Bagley and Sewall Co. Operating in the Mills of The Remington-Martin Company.

THE WORLD'S RECORD FOR SPEED.

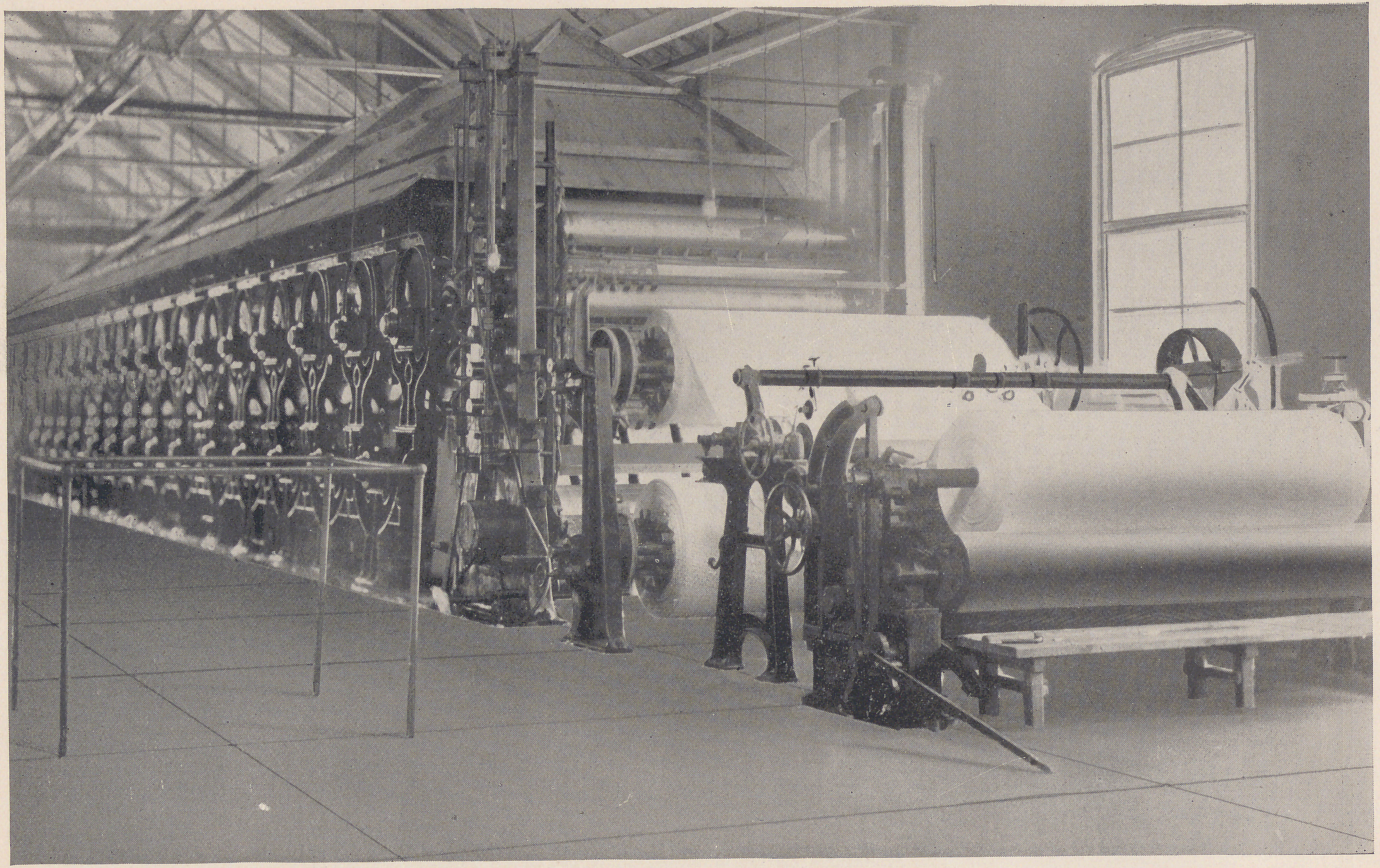
In 1902 The Remington-Martin Company started our 100 inch machine, designed for fast speed, and almost immediately reached the speed of 535 feet per minute, and later ran 560 feet per minute. This machine is shown on the opposite page. It is a trim, well-balanced, well designed and certainly well constructed machine. Recently we visited this mill with some foreign gentlemen, and were completely surprised to find the machine running steadily

AT 585 FEET PER MINUTE.

This was counted and counted again by the parties present. In January of this year this machine was run for a period to see how fast it would make news paper without trouble, and with only the precaution to have good ground wood for the purpose, the speed of

618 FEET PER MINUTE

was reached and maintained. This little machine has made more than 28 tons of regular news in a day's run.



100 inch "Bagley" at Laurentide Paper Co., Ltd., Grande Mere, Quebec. Designed and Constructed by The Bagley and Sewall Co. Started at 503 Feet. Maintains 553 Daily.

ANOTHER RECORD BREAKER.

On the opposite page is given a very satisfactory photograph of a machine 100 inches wide, built by us last year, and running in the mills of the Laurentide Paper Company, Limited, Grand Mere, Quebec, the second machine we have built for that company.

Like its counterpart at the Remington-Martin Company, it has speed power beyond belief. It started, as all the Bagley machines do, at the word, and in this case at the phenomenal starting speed of 503 feet per minute. The first sheet was taken off the machine at that speed, and in ten days the speed was placed at

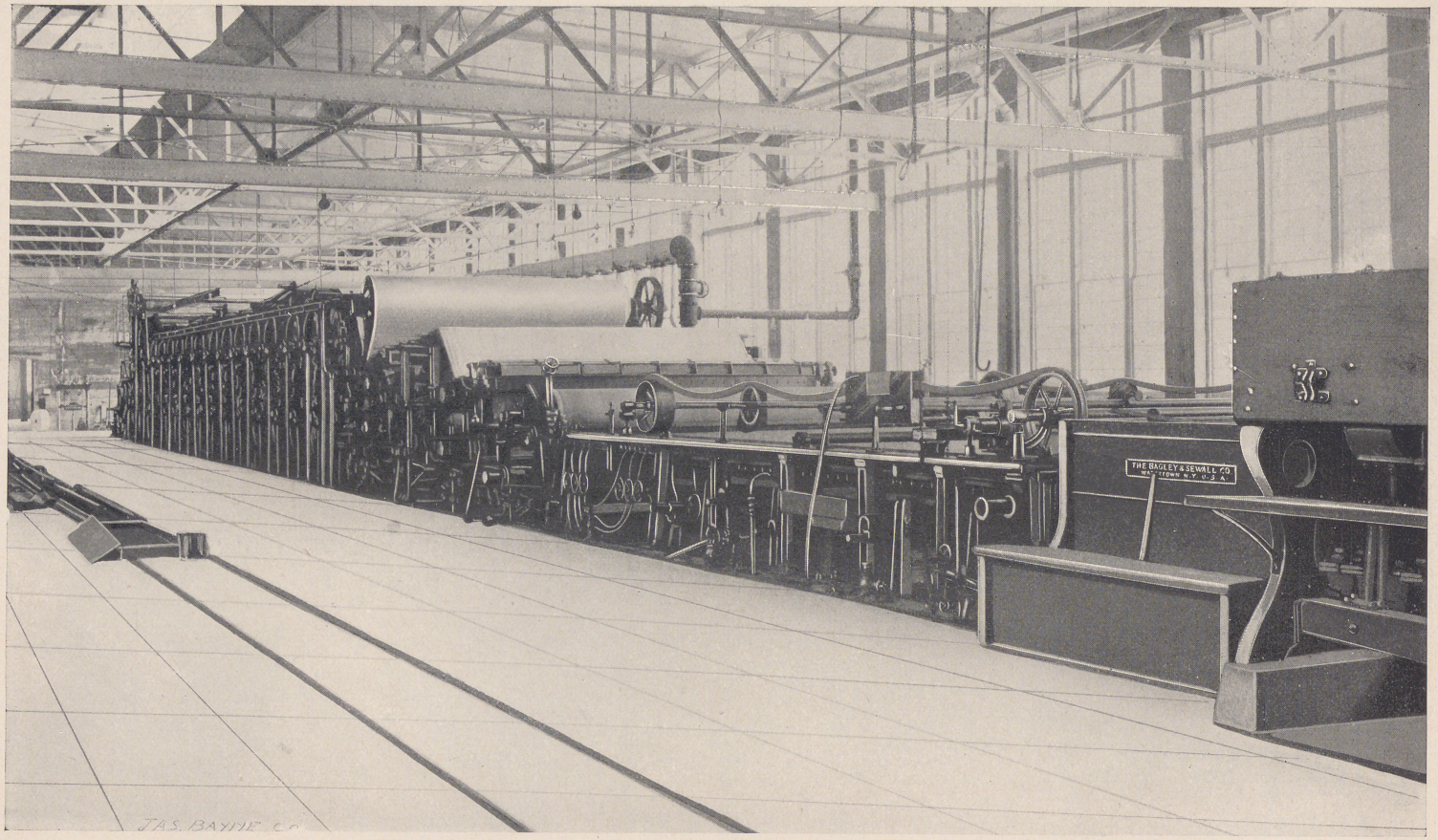
553 FEET PER MINUTE,

that being the ultimate speed of the driving motor. The Laurentide Paper Co.'s letter on the subject speaks volumes. This is given on the next page.

The special geared drive on this machine has won praise from its owner, and from all who have seen and investigated it.

This little machine makes regularly 27 to 28 tons daily.

Co. Started at 503 Feet. Maintains 553 Daily.



163 Inch Bagley. Designed and Constructed by The Bagley and Sewall Company.
Running in the Mills of The Remington-Martin Co.

THE LAURENTIDE PAPER COMPANY, LIMITED,

Manufacturers of Chemical and Mechanical
Wood Pulps, Newspaper, Cardboard & Lumber.

Sir Wm. C. VanHorne, President, Montreal.
George Chahoon, Jr., Vice President & Mgr., Grand Mere.
Wm. F. Robinson, Treasurer, Grand Mere.
E. Alexander, Secretary, Montreal.

Grand Mere, P. Q., January 28, 1905.
Canada.

The Bagley & Sewall Company, Watertown, N. Y.

Gentlemen:

In reply to your letter asking for the results we have been able to get from your last machine, we are glad to say that they have been most satisfactory.

The machine was started in August, and therefore we do not think it has yet reached its maximum production, although the daily averages for the past few months have been beyond our original expectations. This machine was started at 503 ft. per minute, and after running at this speed for two weeks, was put up to 553 ft., which speed has been maintained ever since. Believe the machine is capable of making good paper at faster speed than this, but as our motor is about up to its capacity, it is impossible for us to run faster.

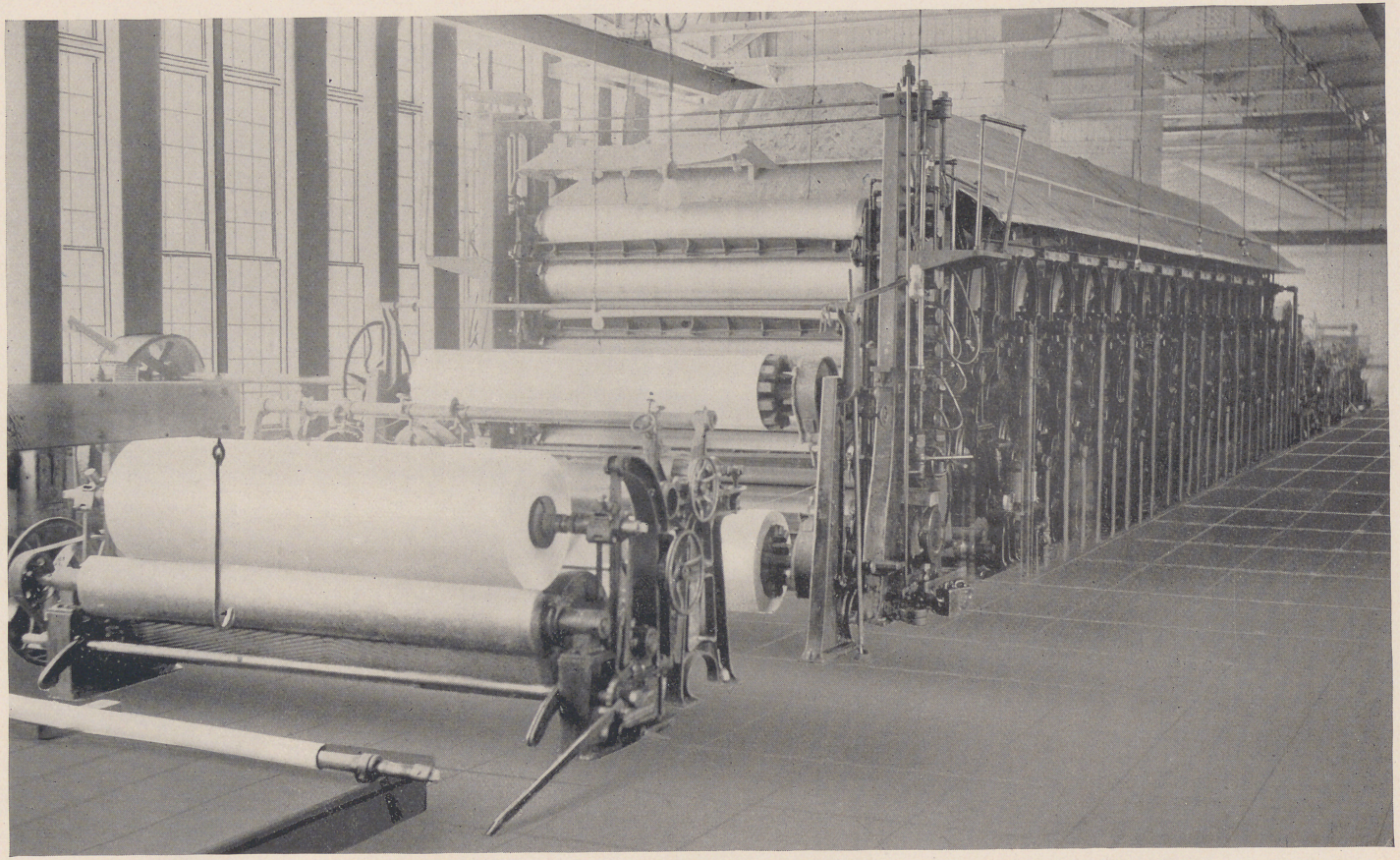
I want particularly to tell you of our appreciation of the drive on this machine, to which we think the large productions and high speeds are mainly due. We think this is about the smoothest running and best designed drive we have ever seen.

The machine has not been running long enough to enable us to give you any figures on the small amount it is costing us to keep it in repair at this wonderful speed, but we feel that you should be congratulated in the workmanship and results of the machine.

Yours very truly,

THE LAURENTIDE PAPER CO., LTD.,

(Signed) George Chahoon, Jr.,
Vice-President.



112 Inch "Bagley." The Most Productive Machine on News Paper in the World. At Raymondville Paper Co. Designed and Constructed by The Bagley and Sewall Co.

ANOTHER RECORD BREAKER.

THE MOST PRODUCTIVE MACHINE IN THE WORLD.

While our machines in other mills have surpassed in speed that attained by our 112 inch machine at the Raymondville Paper Company, which has rarely been run to exceed

540 FEET PER MINUTE,

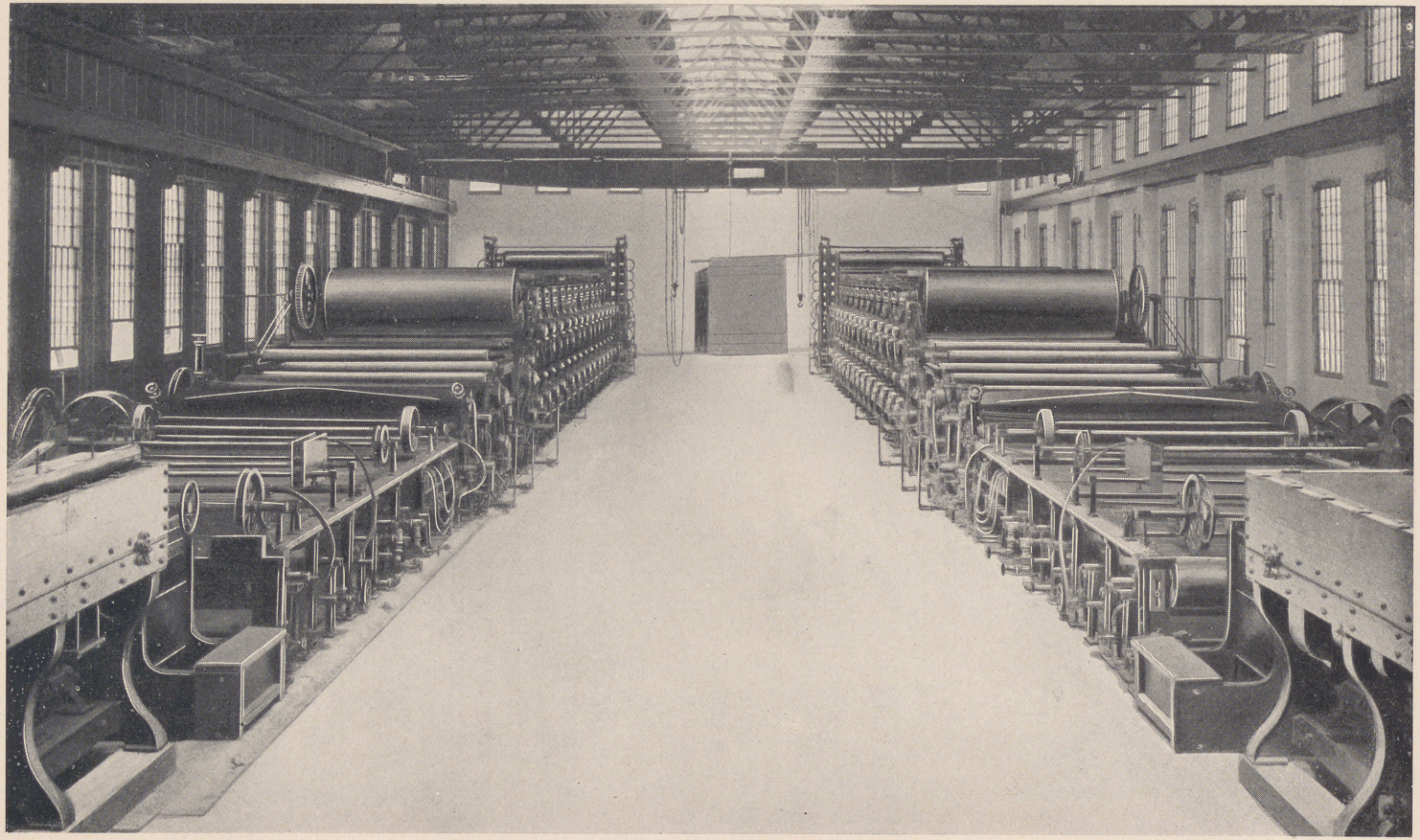
yet this machine has so few breaks in the paper, that it is the nearest of any machine in the world, we believe, to producing in shipping rolls perfect for the market, the theoretical production for the speed, and has made an average output for the period of more than

ONE YEAR OF 31 TONS DAILY.

This is on common news of an average of 100 inches wide, and the reason is perfectly clear; no paper is taken back as broke. The machine simply does not make enough in twenty-four hours to take in consideration. It all goes into finished shipping rolls. Day after day the machine runs without a break in the web of the paper, and a recent run for a long period showed net production over

32 TONS DAILY.

This speaks for the carefulness with which the machine is constructed, and its design, and certainly needs no further comment. The photograph of the machine is on the opposite page.

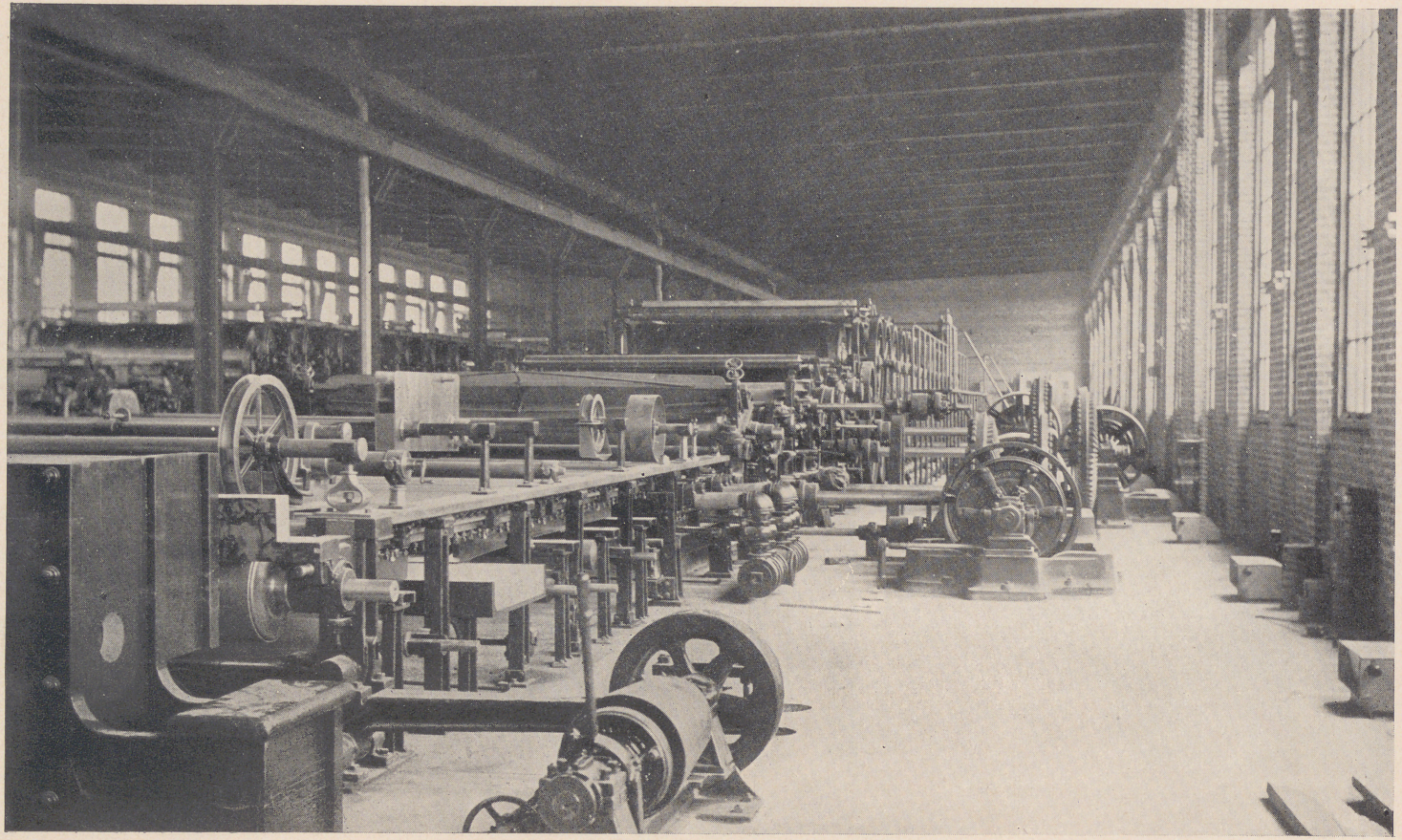


Two 120-inch Bagley Fourdriniers in the Mills of The Imperial Paper Mills Co., Ltd., Sturgeon Falls, Ontario.

TWO 120 INCH "BAGLEYS."

The two machines opposite are each 120 inches wide, and installed by us in the factory of the Imperial Paper Mills Company, at Sturgeon Falls, Ontario. These machines were built in 1898, and not erected until 1903, yet despite the fact that during that period great improvements were made by us, developing the machine at every point, these machines have operated quite up to the later built machines, and more than 33 1-3 per cent. greater production has been made than was calculated upon or expected by the purchaser.

The machines are duplicates, and are equipped with Warren Patent Double Drum Winders, our special self-contained tight pulley geared floor driving, and driven by electric motors, both on variable and constant speeds.



A "Bagley" 110 inches wide at St Regis Paper Co.

A SUCCESSFUL MACHINE.

On the opposite page is the driving side of one of our machines at St. Regis Paper Company, Deferiets, New York, being one of the four installed by us in that successful mill.

The machine runs at 525 feet per minute, and has maintained its speed and production from its start in 1901.

The photograph shows the heavy floor gears, and the heavy self-contained floor stands, the cut gears on the dryers, and all the many essential points in the driving of a machine, which we have brought to such a state of perfection.

The following letter from the Treasurer and organizer of the St. Regis Paper Company, most satisfactorily tells of the results, and of the methods employed by us in the dealings with our customers.

G. W. Knowlton, Pres. D. M. Anderson, Gen'l Mgr.
Alvah Miller, Vice Pres. G. C. Sherman, Treas.
G. E. Hall, Asst. Sec'y.

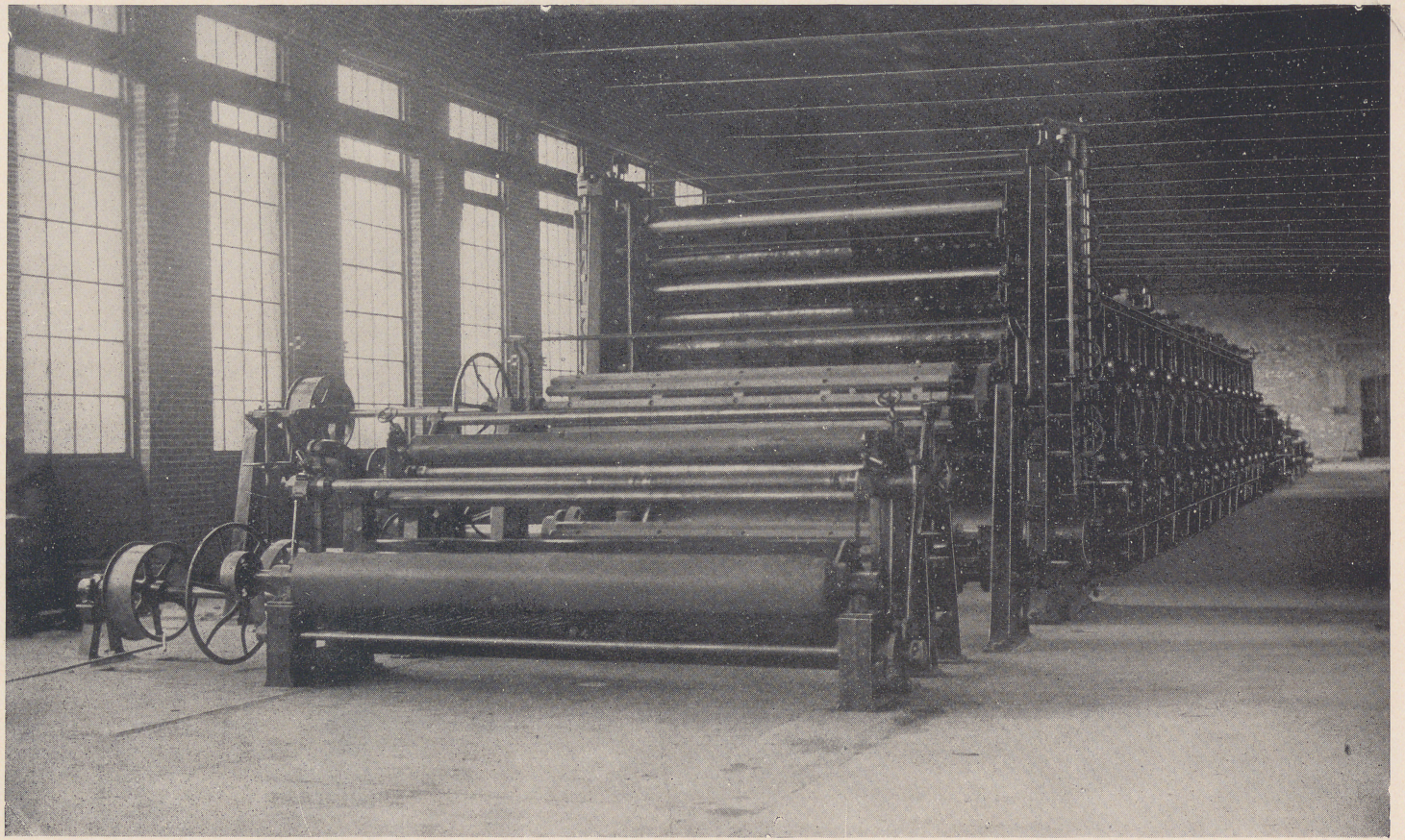
ST. REGIS PAPER PAPER CO.

The Bagley & Sewall Company, Watertown, N. Y.

Gentlemen:

In response to your inquiry, we are happy to say that all the machinery furnished us for our new mill, has operated to our complete satisfaction. The most important part of our equipment, furnished by you, consisted of four paper machines of the following widths, viz: 145 in., 126 in., 110 in. and 90 in.; twenty-five extra heavy three-pocket 24 in. pulp grinders, and twenty wet machines for sulphite and ground wood.

The paper machines were started without any difficulty, and have been making a satisfactory grade of paper from the start. We are operating them at 475 feet to 525 feet per minute, and believe they are producing, for their inches, more paper than any other four machines in the world. It is hardly fair to consider a first year's run a comparison, but we may, nevertheless, say that our first year's run exceeded in quantity the amount we expected ultimately to attain. The parts of all four machines are interchangeable, excepting as the widths differ, although we are happy to say



145 inch "Bagley" at St. Regis Paper Co.
Designed and Constructed by The Bagley and Sewall Co.

that we have not yet been obliged to use any of the spare parts one ordinarily keeps. Indeed, our repair bill has been practically nothing, and you have fulfilled your guaranty to supply us with as good machines as could be built, for the purpose of manufacturing news paper.

Our grinders have all operated successfully, and have produced a satisfactory quantity of pulp. They are substantially built and sufficiently heavy for the power. We use five grinders on each line, operating under 1800 h. p. The couplings and shafts were all made exactly to templet and are interchangeable, and we have not experienced any difficulty in interchanging them, as becomes necessary when a stone has to be removed. We are really quite surprised ourselves, at being able to keep all five lines in almost continuous operation, for we expected, when we first made our plans, that one line would always be down, as you will no doubt recall.

The wet machines, running on both ground wood and sulphite, have performed their work satisfactorily.

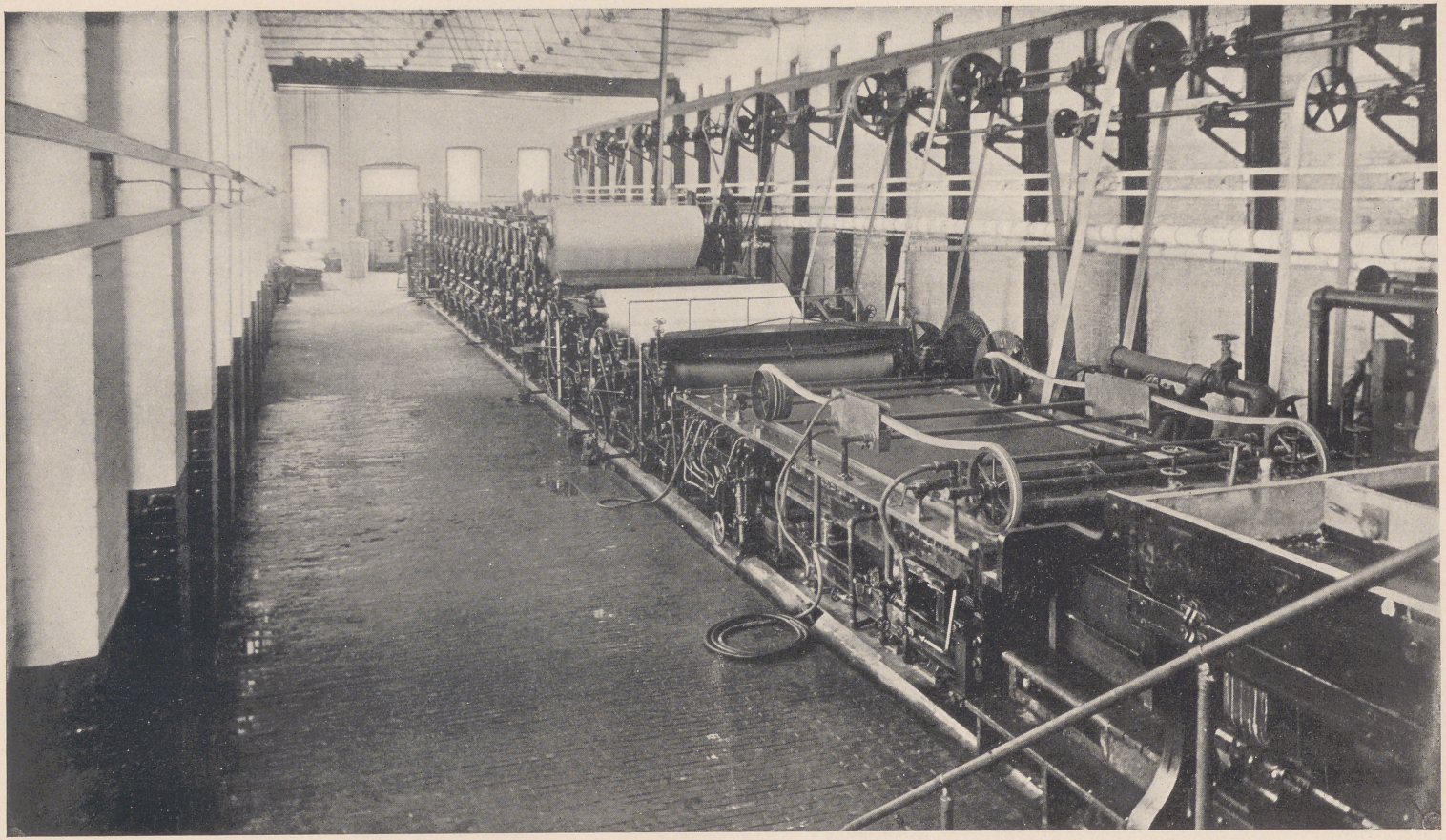
In closing, we desire to thank you for the satisfactory manner in which we were able to close up our accounts. The aggregate of our purchases from you was between two and three hundred thousand dollars, and your deliveries ran over two years, without any adjustment of accounts. Therefore, we think it is a matter of congratulation to both of us that a complete and satisfactory settlement was effected in the course of a single session, and we think it speaks volumes for the methods of your concern.

Yours very truly,

ST. REGIS PAPER COMPANY,

(Signed) G. C. Sherman, Treas.

The above is the result when a mill is completely equipped with our Paper Machines, our Wood Pulp Grinders, Wet Machines and Pumps.



110 inch "Bagley" Book Machine at New York and Penna. Co., Lock Haven, Pa.

MACHINES FOR GENERAL WORK.

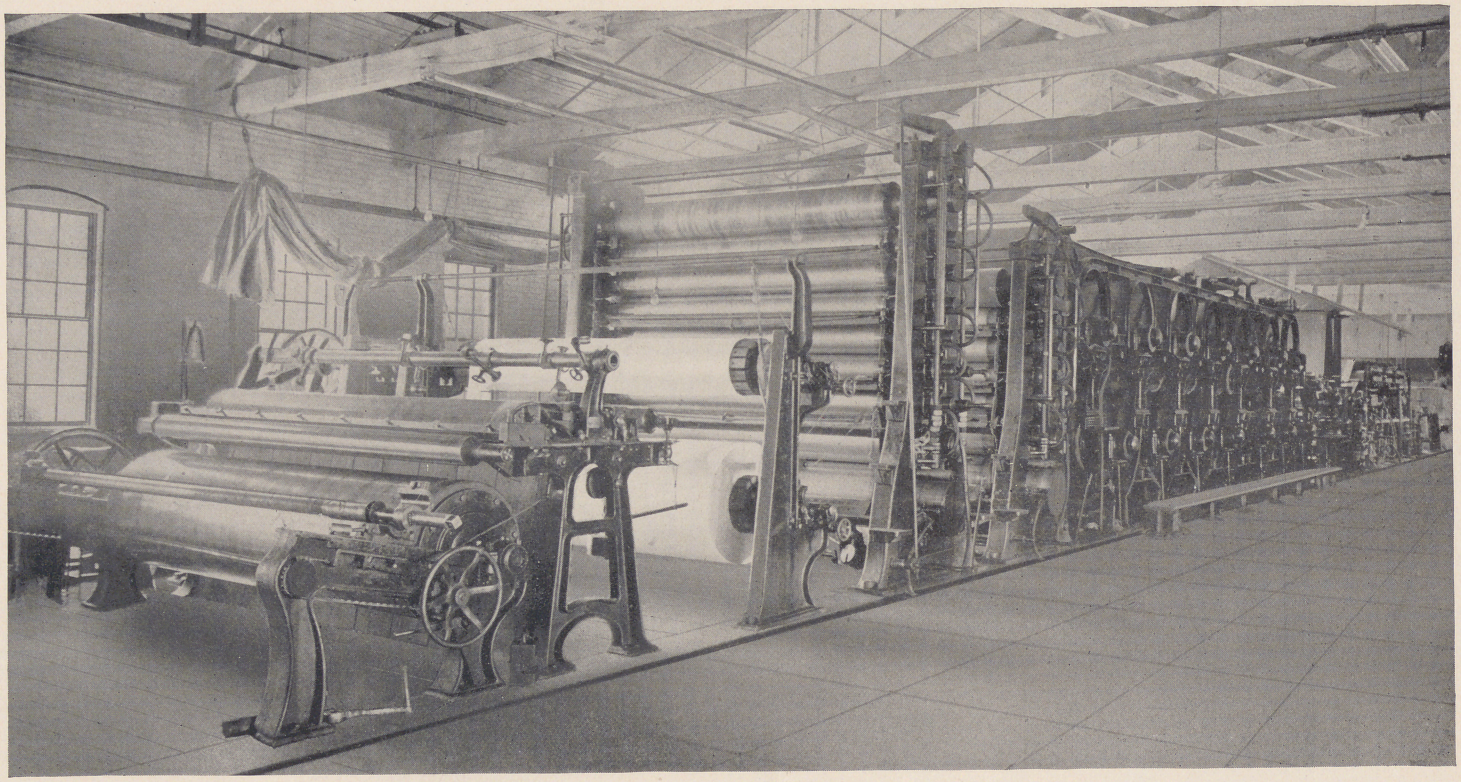
While from the preceding pages the reader can gather the position we hold in the news paper making world, we don't wish our good friends and customers to think that we are not interested just as deeply in machines for slower speed and for finer quality of paper.

On the opposite page we show a Book machine placed by us in the mills of the New York and Penna. Company, at Lock Haven, Penna.

This machine is 110 inches wide, and especially designed and arranged for the manufacture of Book, Fine Hardware papers and specialties such as that Company so successfully produce. The machine was installed in 1903, and immediately after its starting operation, we were honored by being entrusted with another machine 125 inches wide for their Mills at Johnsonburg, Penna., one of the finest Book Mills in the world.

These machines are adapted for Book and other high grade papers, and by bringing our experience with our high speed work to bear on the slower going machines, have produced the best and strongest machines for the purpose put on the market.

We solicit orders for machines for making Special Papers, Book, Manillas and Boards.



110″ "Bagley" Harper Fourdrinier, Superior Paper Co., Kalamazoo, Mich.
Designed and Constructed by The Bagley and Sewall Co.

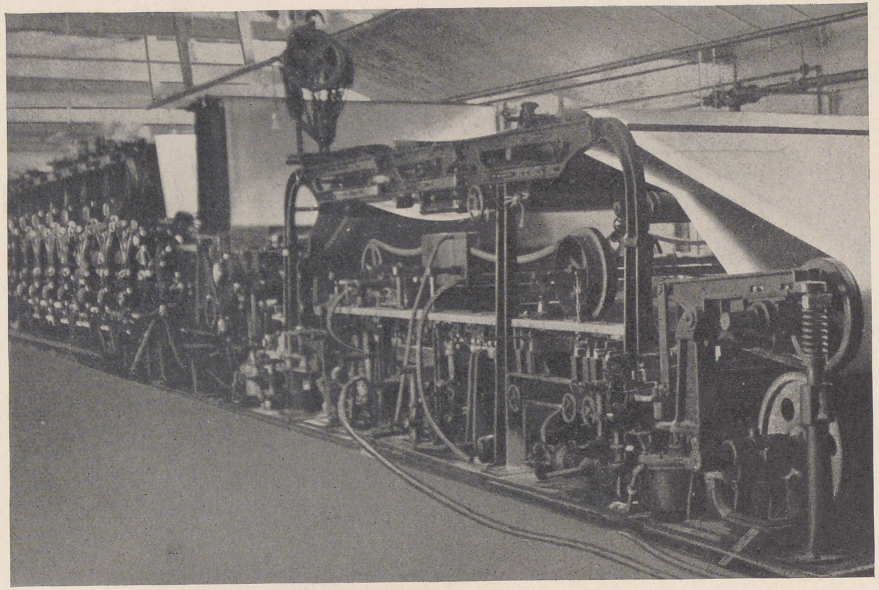
HARPER FOURDRINIERS.

The possibilities of the Harper Fourdrinier Paper Making Machine are hardly realized by the trade in general. The machine shown on the opposite page, which was built by us and erected in the mills of the Superior Paper Company, at Kalamazoo, Michigan, is for special papers, varying in weight from 15 pounds to the ream of 500 sheets, twenty-four inches by thirty-six inches, to paper of the same size and number of sheets that will weigh 90 pounds to the ream.

On this machine beautiful specialties and high class papers are made, which have been received by the market with the alacrity that such well made goods deserve, and a very wide range of papers has been produced to the entire satisfaction of the owners.

One of our Harper Fourdriniers in the Mill of the E. B. Eddy Company, Hull, Quebec, with more dryers and three presses, has run paper in weight from 15 to 150 pounds per ream 24 x 36, 500 sheets.

For tissue papers, for all purposes the Harper Fourdrinier is an ideal machine. Three of our Harpers are in the Carthage Tissue Paper Co. at Carthage. They have one Cylinder Tissue Machine, built by us, making four machines all told of our design and manufacture.



Harper Fourdrinier at Superior Paper Co.
Designed and Constructed by The Bagley and Sewall Company.

HARPER FOURDRINIERS.

Two nice letters from users of our Harper Machines are given herewith, and needless to say we appreciate both.

THE E. B. EDDY COMPANY, LIMITED.

E. B. Eddy President. S. S. Cushman, Vice-Pres.
W. H. Rowley, Sec. & Treas.
Hull, Canada.

The Bagley & Sewall Company, Watertown, N. Y.

Gentlemen:

Mr. Eddy says in reply to your letter of the 27th, that whether you send the Cornwell people here, or anybody else here, and whether you bring any Yankee cigars when you come or whether you do not, you will always find him ready and willing to bear record to the sterling qualities of "Uncle George Bagley's" machines and the way you put them together.

If there is anything further or particular that any one of us, or all of us, can do in this behalf, all you have to do is to let it be known, for we are with pleasure at your service.

Meanwhile with personal regards from all to all, I am,

Yours very sincerely,

(Signed) W. H. ROWLEY.

SUPERIOR PAPER COMPANY.

Walter S. Hodges, President. Frank H. Milham, Secretary.
Herbert H. Everard, Vice-Pres. Hale P. Kauffer, Treasurer.

Kalamazoo, Mich., April 23, 1904.

The Bagley & Sewall Company, Watertown, N. Y.

Gentlemen:

Replying to your favor of the 18th inst., under separate cover by same mail today we are sending you the latest photograph we have of your Harper Fourdrinier Machine, now running in our Mill, and which, by the way,

we do not hesitate to say is the best running machine we have ever seen.

It is running mostly on light weight catalog papers, and it is a fact that we have made 22½ lb. paper, basis 24 x 36, for 36 consecutive hours without a break. The photcgraph is not as good as we might wish it to be, but it is the only one we have, and we are glad to send it to you.

With best wishes we are,

Yours very truly,

SUPERIOR PAPER COMPANY,

(Signed) Per W. S. Hodges, President.

CYLINDER MACHINES AND MACHINES FOR BOARDS.

We have built some of the most successful board making machines in the country. We are familiar with this trade, both for wood pulp boards, straw boards, and boards from old papers, and solicit this class of work, which we will faithfully carry out.

Cylinder machines of one, two, three, four, six or eight cylinders for heavy papers, we are prepared to build, also for special papers.

Cylinder machines for tissue papers we have made quite a specialty of.

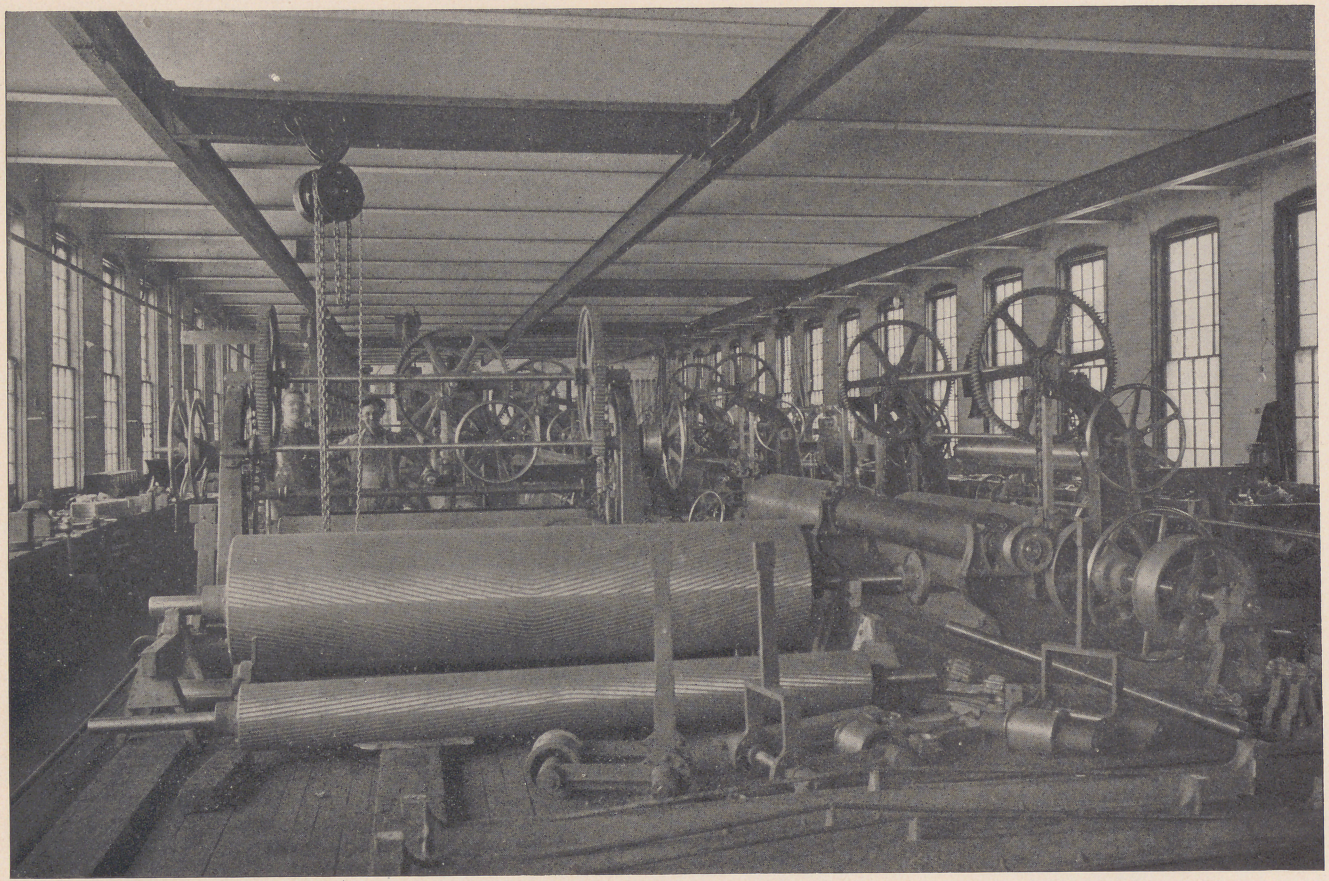
Cylinder machines for drying sulphite and chemical pulp we have built for many years, and have built the largest in width and in drying surface yet put on the market.

From the preceding pages on paper making machinery, paper manufacturers can obtain a fair idea of our status in the trade. We are sending our machines all over the world. At this writing, we are building machines for Norway, France, Canada and Japan, and we shall be glad to negotiate for machines to produce any kind of paper and in any quantity desired.

ACCESSORY MACHINES FOR PAPER MILLS.

We make a specialty of building special machines applicable to our paper making machines, to machines of other makers, and in connection with old machines which are desired to be brought up-to-date. Photographs and descriptions will be given of the following:

Warren two-drum Winders.
Single-drum Winders.
Compensating Winders.
Two-drum Stack Reels.
Three-drum Stack Reels.
Revolving Reels.
Slitting Machines.
Calenders.
Floor Drives, Quill type, self-contained.
Floor Drives, Heavy Loose Pulley type, self-contained.
Floor Drives, Medium Loose Pulley type, self-contained.
Floor Drives, Light Loose Pulley type.
Press Rolls.
Suction Box Covers.
Brass Tube, Iron and Galvanized Rolls.



A Group of Warren Patent Winders in our Erecting Shop. These Winders Designed and Built Exclusively by The Bagley and Sewall Company

THE WARREN PATENTED TWO-DRUM WINDER.

BUILT EXCLUSIVELY BY US UNDER PATENTS OF MR. J. J. WARREN.

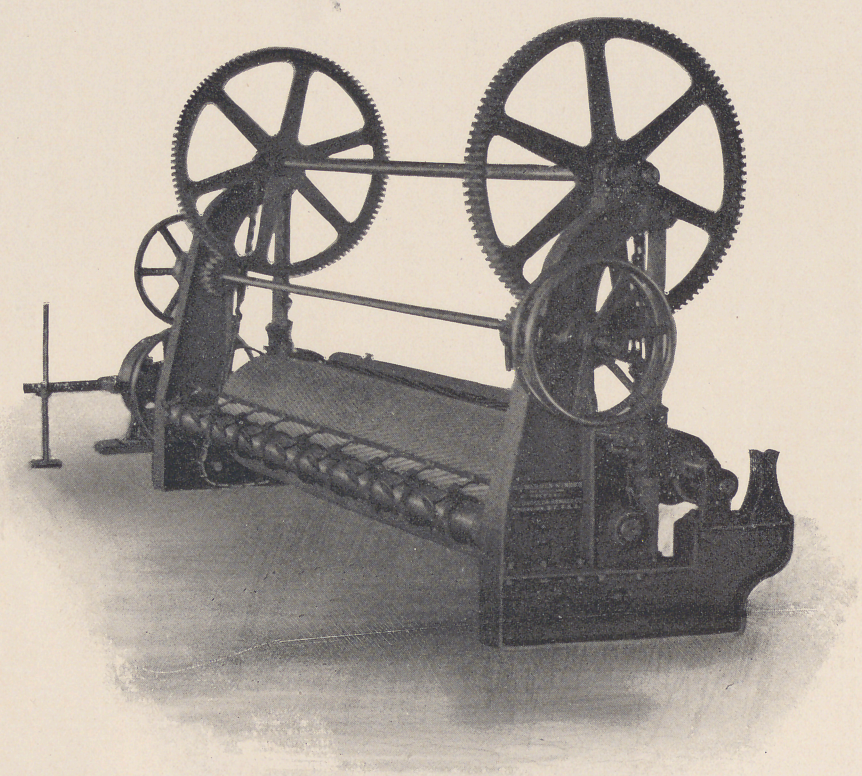
Since the development of the modern paper machine, which occurred simultaneously with our going into the business of manufacturing papermaking machines in 1888, there has been a much felt need for a winder that would properly prepare the rolls of paper coming from the machine for the consumer's use. This need had practically prohibited the use of wide machines and retarded the speed of the narrower ones, because the crudeness of the winding machinery made breaks so often that it was impossible to take the finished paper away, properly wound for shipment, as fast as the machine made it.

The Warren Winder will enable the machine tender to take the finished paper away from any machine, and have plenty of time between rolls, even though the machine should run 800 feet a minute, as this winder has successfully made rolls for news paper, taking the paper off the reels at 1200 feet per minute.

During the last year we have put them on machines as narrow as 66″ and we believe that, irrespective of the width, this winder is proper for any high speed machine, or for any machine on which it is desired to wind a perfect roll. We have them in use on news, book and manilla, and on the last two grades of paper where a number of rolls are desired on the same shaft, this winder is the proper thing, as we can wind on a machine 120″ to 130″ wide, eight and ten rolls, and have them all come apart satisfactorily.

The Warren excels all winders yet made in many points, all of which tend to make perfect rolls. "The shaft starts easier than in any other winder." "When a number of rolls are wound at one time, the paper is steadier on the Warren than on any other, and the rolls do not run together." "Untrue cores, (and 95 per cent. of them are untrue), have no terrors for the Warren, owing to its constuction, and good rolls are easily made on bad cores."

On this next page is a fine photograph of a winder exactly as built today.



The Warren Patented Two-drum Winder.
Built Exclusively by The Bagley and Sewall Company.

WARREN PATENTED TWO-DRUM WINDER.

This winder we have running on every make of paper machine in this country, and have sent many to Europe. We are receiving the second and third orders from parties using same. On this machine a good shipping roll can be made from a very uneven and non-level sheet of paper. Special mechanism provides for increasing or decreasing the pressure on the winding shaft, as may be required by rolls that are inclined to be too soft or too hard on the ends.

The construction of the machine is on the heaviest and best lines. The drums are 28 and 12 inches diameter, respectively, are of cast iron, and are corrugated from end to end spirally on one inch pitch. This serves to give a continuous spreading action to the paper, keeping the rolls from running together and from wrinkling. In addition a spreader is attached to the winder, which acts before the paper passes on to the winder. The paper passes under and up between the two drums.

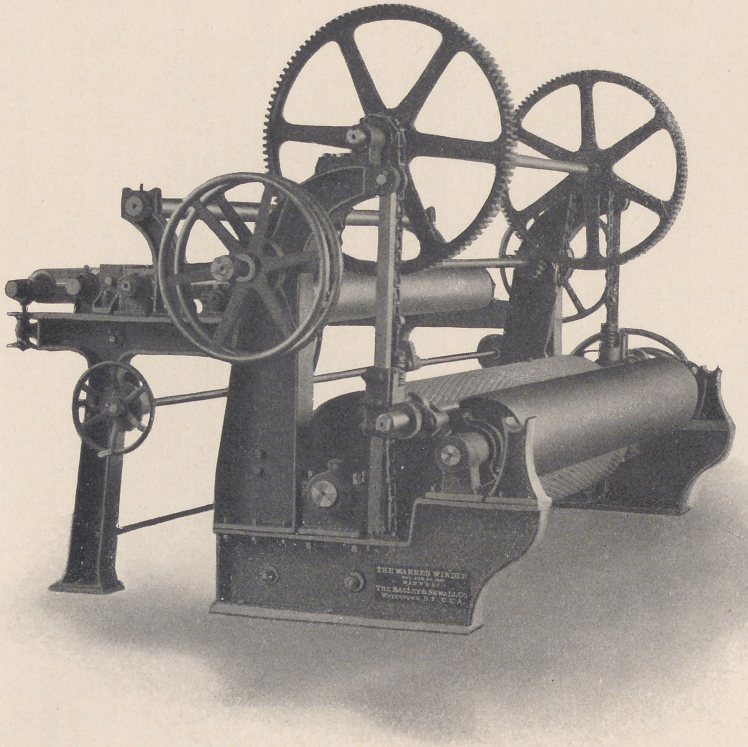
The winder has a patented automatic guard on the front drum, preventing injury to the operator, and this is a feature that cannot be imitated by others.

The winding shaft has quick opening boxes, and the shaft is regularly built for 3 inch cores, unless especially ordered otherwise. Split or expanding shafts are extra.

The driving is by our slip belt method, by which the machine is driven from zero up to the maximum speed desired.

The winder is made detached from the slitting machine, as shown on opposite page, or combined with same if desired, as shown on next page.

Prices on application.



The Warren Patent Two-drum Winder Combined with Slitting Machine.
Built Exclusively by The Bagley and Sewall Company.

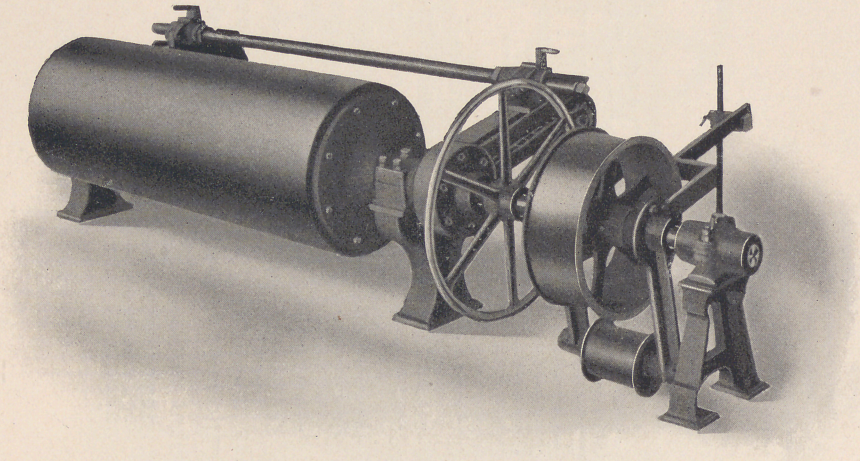
WARREN PATENTED TWO-DRUM WINDER, COMBINED WITH SLITTING MACHINE.

For a new machine, and where the winder is desired for operation on an old machine requiring a new slitting machine, and where it is desired for use as a rewinder in a cutting up or finishing room, we build the Warren Winder with the Slitting Machine attachment. This is very compact, taking up as little room as possible, and makes a handy arrangement.

For rewinding only, a stand is attached to the slitting machine, which carries the shaft on which is the paper to be rewound, a retarding friction wheel and strap are furnished.

This arrangement works most satisfactorily for any number of rolls, of any diameter required by the market.

Prices on application.



Single Drum Inclined Frame Winder.
Designed and Built by The Bagley and Sewall Company.

SINGLE DRUM WINDERS.

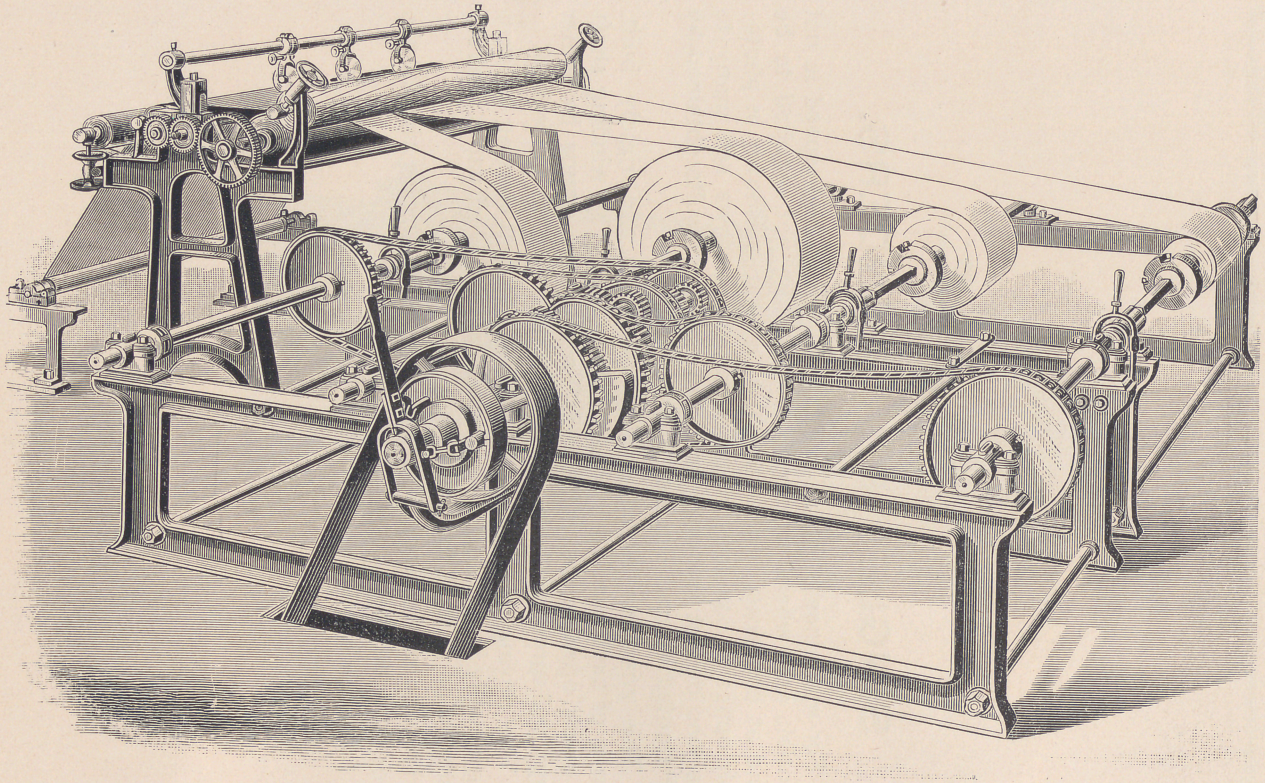
For machines of small width, and where high speed is not essential, and where a number of rolls are not required to be wound at one time, the single drum winder as shown in photograph opposite has long been a favorite, and we sell many to those who do not feel they need the especial results obtained by the Patented Warren Double Drum Winder.

This machine is beautifully designed and rigidly built. Drum is of cast iron, 28 inches in diameter. The winding shaft has quick opening boxes, and is held to the drums by either springs and sprocket chain, or by cable and weights, as desired.

The driving is our favorite slip belt type, starting at zero and gradually increasing to the maximum speed of paper desired, usually twice that of the machine.

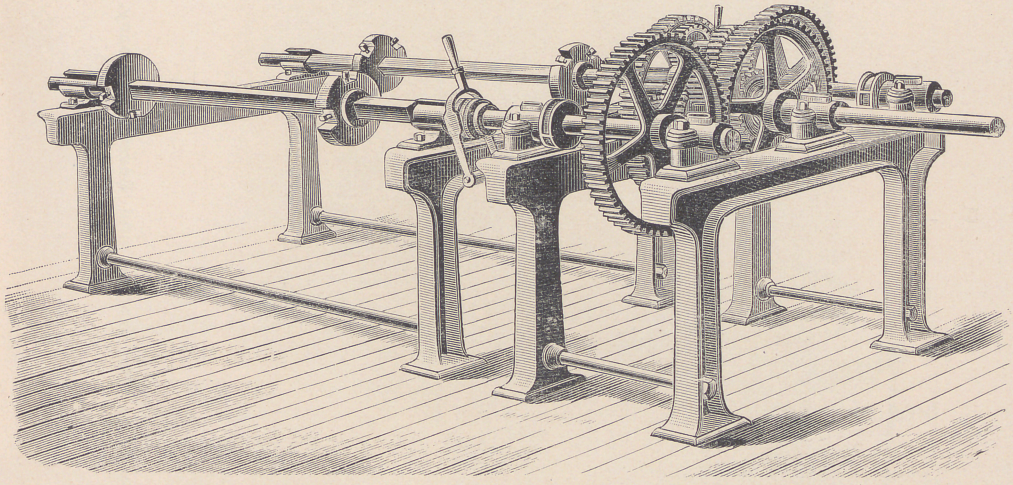
We also make single shaft winders with friction clutch, slip belt or cone driving.

Prices on application.



The Bingham Compensating Winder. For Four Rolls.
Built Exclusively by The Bagley and Sewall Company.

COMPENSATING WINDERS.



THE BINGHAM COMPENSATING WINDER FOR TWO ROLLS.

BUILT EXCLUSIVELY BY US.

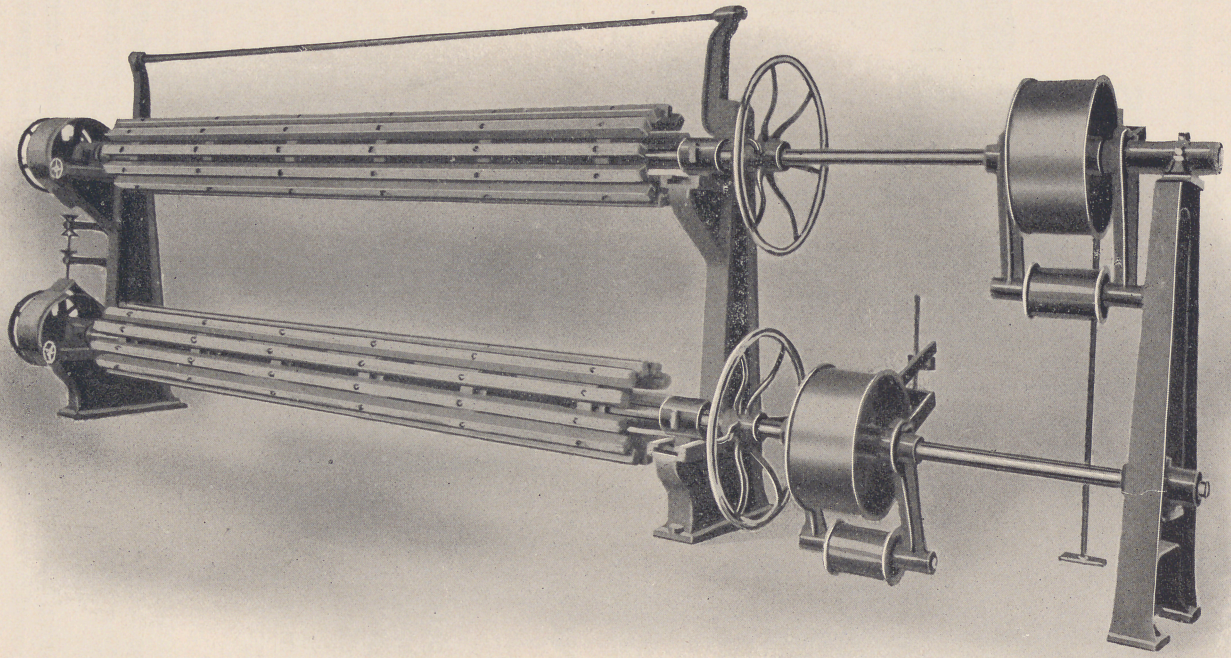
Under patents of our Treasurer, Mr. C. D. Bingham, we build the simplest, best designed compensating winders for 2, 3, 4, 5 or 6 shafts. Absolutely equal tension is maintained on each shaft, regardless of the varying diameters of the rolls being wound.

The compensating gears are accurately cut, and run more easily and more smoothly than any other compensating winder made.

Several hundred of these machines are operating throughout the United States and Canada, on papers of all kinds and grades. The compensating mechanism is very compact, being all on one shaft restricting the space occupied by the winder to the smallest dimensions.

The 4-shaft machine on opposite page shows rolls being wound of four different diameters, and shows the paper coming from the slitting machine. The slitting machine is not included in our prices unless especially asked for.

Prices on application.



Two Drum Stack Reel. Designed and Built by The Bagley and Sewall Company.

STACK REELS.

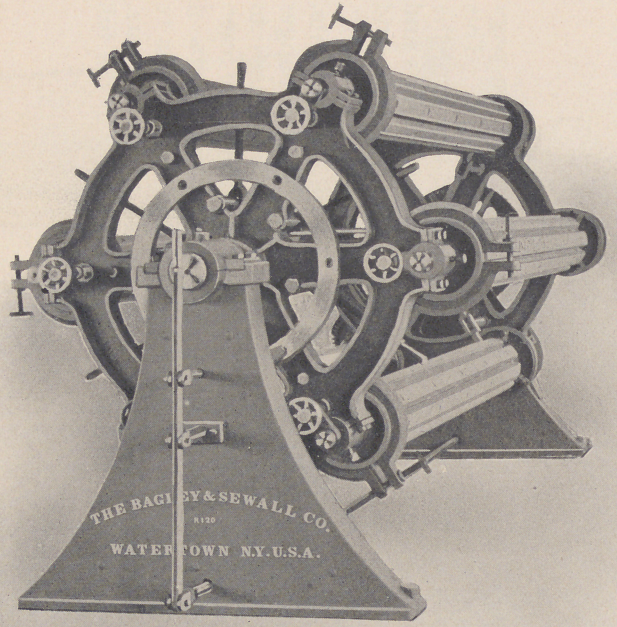
We build Stack Reels for two and three drums. On page opposite is shown a two-drum reel for a wide machine. This machine is driven by our slip belt type of drive, and is one of the best reels yet devised. Entirely new friction retarding straps and pulleys, wider than any on the market, are on the front side, and a large hand wheel for starting the reel is at the back.

Each reel drum has side-wise and end-wise adjustments, and by the special form and construction of our reel, all danger to the operator is avoided. This feature alone is enough to recommend it to any purchaser in view of the number of men that have been killed on reels of other styles and other makers.

We make three-drum reels differing from the cut only as to size of drums and method of driving, which is by means of gears, and differing in the method or retarding the unwinding of the full reel.

Built for any width of machine.

Prices on application.



Special Heavy Six-drum Revolving Reel.
Designed and Built by The Bagley and Sewall Company.

REVOLVING REELS.

For use on Book machines, and machines on which the paper is desired delivered in sheets, we offer our new six-drum revolving reel.

This reel revolves by power, and at the same time, the reel next to come in contact with the paper is started in motion, at the proper speed, so that a minimum loss of paper occurs each time a reel is changed.

This machine is a great, strong, massive piece of mechanism, and is operated entirely from the front side.

We build also a cheaper 6-drum reel, not so heavy, but satisfactory, and which is in use on many machines.

We make two and three and four drum revolving reels, and what is known and liked by many manufacturers as a bar reel.

TISSUE REELS.

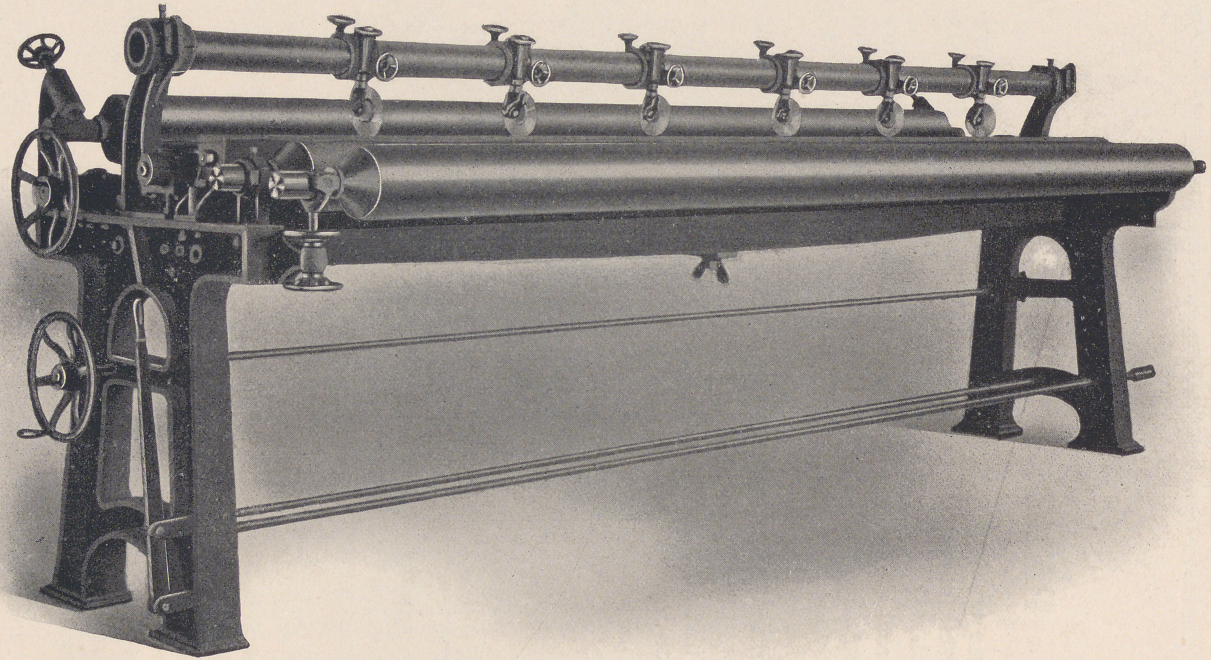
For tissue paper we build expanding reels, for use in preparing tissue for sheet work.

These expanding reels we make in two styles, one a simple affair that is adjusted by hand to the diameter needed to finish the paper in the sizes of sheets needed, and this is in use on many machines.

Another more elaborate and expensive reel we construct so that the reel is expanded or contracted by the operator from a hand wheel, all the expanding arms being operated from one point.

Again some mills require an arrangement to make both sheets and rolls, and for this we build our combination expanding and two-drum stack reel.

Prices on application.



Slitting Machine for Wide Machines. Designed and Built by The Bagley and Sewall Company.

SLITTING MACHINE.

A neat appearing slitting machine has always been placed on our machines, but recently we have produced our low type of slitter, which is compact and perfectly arranged. The machine shown on opposite page represents one of these machines for a wide paper machine, and has special features which make it extremely valuable for this purpose.

The slitter shafts are heavy, and any desired make of top slitter is furnished by us. The lower slitting shaft is either driven by gears from the drum or by belt and friction clutch, as may be desired by purchasers.

Regularly these machines are equipped with brass paper rolls and steel drum.

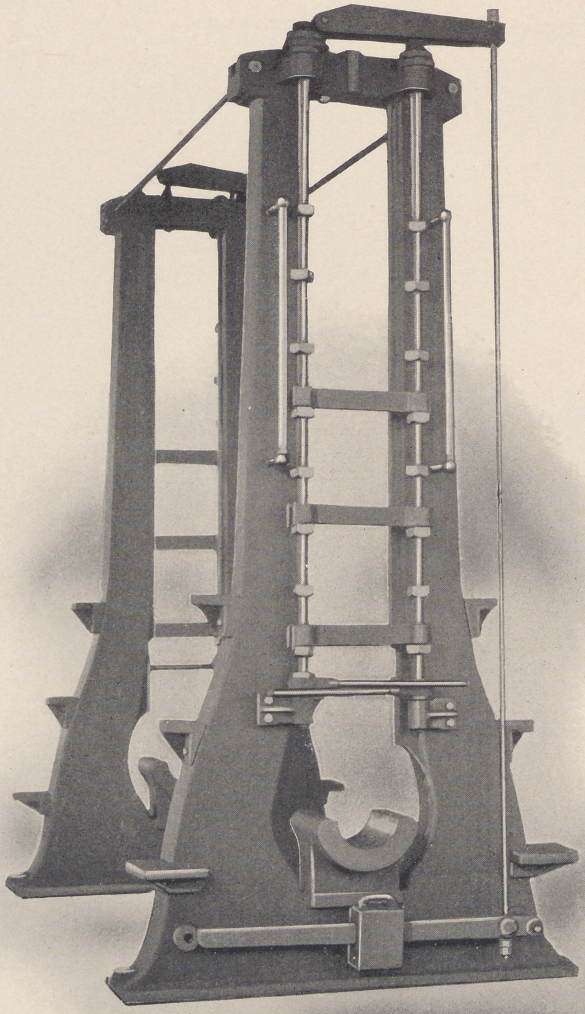
We make a specialty of building these machines for use on old paper machines, and are prepared to construct same for any width of machine.

SLITTERS.

Double band lower slitters of any diameter furnished, made with best steel edges, ground by special machinery.

Top slitters always on hand.

Prices on application.



Ratchet Lift Calender Housings.
Designed and Built by The Bagley and Sewall Company.

CALENDERS.

The photograph on opposite page shows very satisfactorily a pair of our ratchet lifting calender housings. This device is inexpensive, and avoids all climbing to the top of stacks to raise rolls. Each roll can be raised separately by the operative when standing on the floor, or he can raise as many rolls at one time as desired.

All the journal boxes for rolls are water cooled, and lined with babbitt. The arrangement for applying weights is simple and effective, and each frame is fitted with hand rails and steps for operating. All intermediate rolls have brass chafing rings.

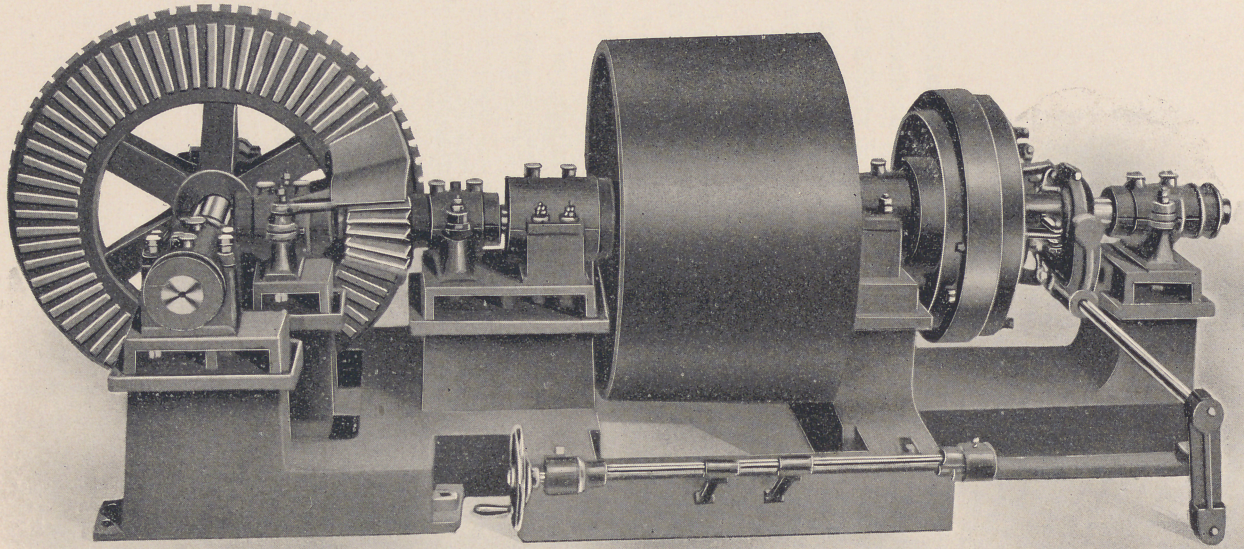
We are prepared to furnish these housings of various weights and heights, according to the size of the machine and duty to be performed.

Rolls for calendering we are glad to quote on of any diameters or lengths.

Doctors of any style we furnish, and fit to stacks.

Regularly our housings are built in three sizes, styled A, B and C, but we have a very light housing for very small machines.

Prices on application.



Heavy Tight Pulley Floor Drive. Designed and Built by The Bagley and Sewall Company.

PAPER MACHINE HEAVY TIGHT PULLEY FLOOR DRIVING.

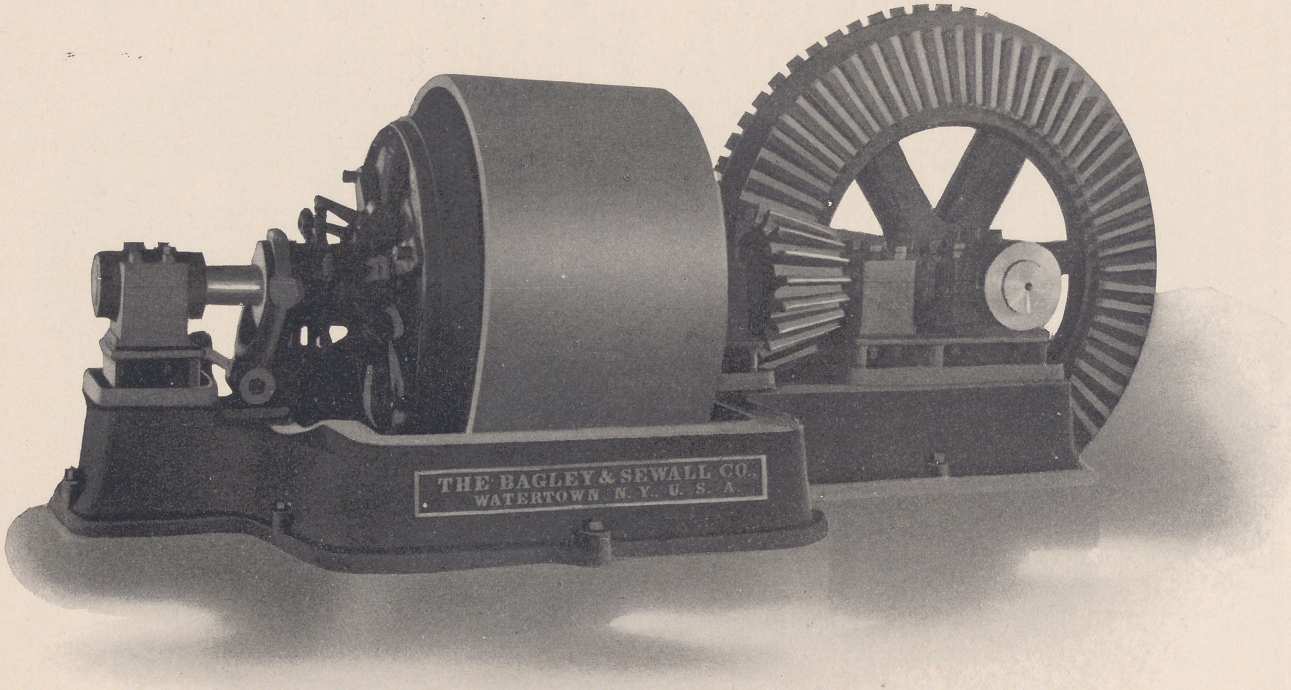
No one part of our paper making machinery has been given more thought and attention than our floor driving, and we believe we have excelled all others in this respect. It is one of the crucial points of a machine. The drive opposite is one we have placed on a large number of our machines, yet strange to say, the number we have installed of this drive on machines manufactured by our competitors is fully as large. In one year twenty machines of other makers were equipped.

The drive has especial merit, because of its construction, avoiding the use of a loose pulley. In this drive, the pulley runs on its own bearings, and can be lubricated with grease or any thick oil used in the mill. The gear and pinion are held between two bearings each, and all are mounted on a heavy self-contained stand. The clutch is so arranged that it can be taken off with the least possible labor. It is the heaviest drive on the market.

We are making a specialty of equipping machines with the drive, and will be glad to quote at any time. Standard gears 7, 8 and 9 inch face on this drive.

See Laurentide Paper Co. letter, page 31.

Prices on application.



Heavy Loose Pulley Floor Drive. Designed and Built by The Bagley and Sewall Company.

PAPER MACHINE HEAVY FLOOR DRIVING.

Paper machines from 90 inches to 163 inches in width have been equipped by us with powerful floor drive, shown opposite, and they have given satisfaction everywhere. The drive is unnecessarily heavy for machines under 100 inches, but the speeds of those small machines having this drive have been between 500 and 600 feet per minute, and we thought best to be safe.

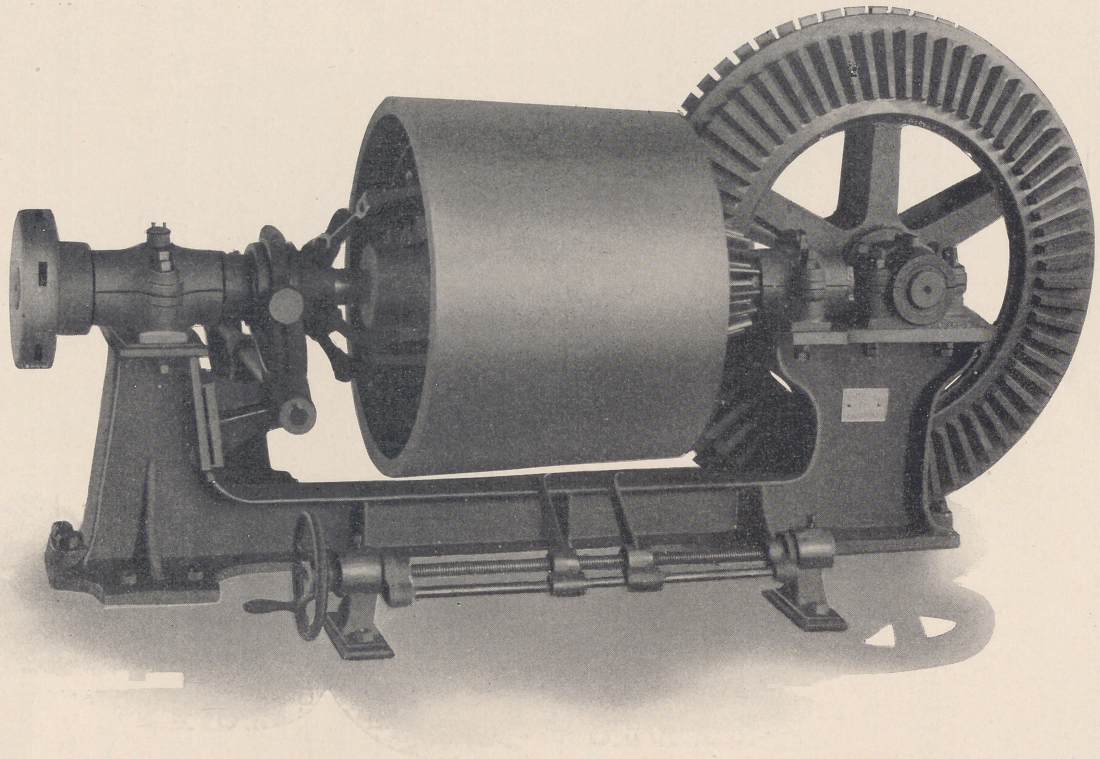
The base is self-contained, one great casting made in varying heights as may be required by the different parts of the paper machine. The pulley is of the loose pulley type, well balanced and bushed with cast bronze, and a large chamber in the hub of pulley for oiling same. The shaft carrying the pulley, clutch and pinion is bored for oiling from the end, and a clever arrangement at the last bearing permits the supply of oil to the pulley to be maintained.

Gears used regularly on this drive are 7, 8 and 9 inches face. Clutches as large as necessary to safely do the work.

This drive is running our fast news machines up to 585 feet. We can apply to any machine, and shall be glad to quote on single drives or for full machines.

For heavy calender or dryer drives we recommend this to mills desiring to bring old machines up to modern speeds.

Prices on application.



Medium Loose Pulley Floor Drive. Designed and Built by The Bagley and Sewall Company.

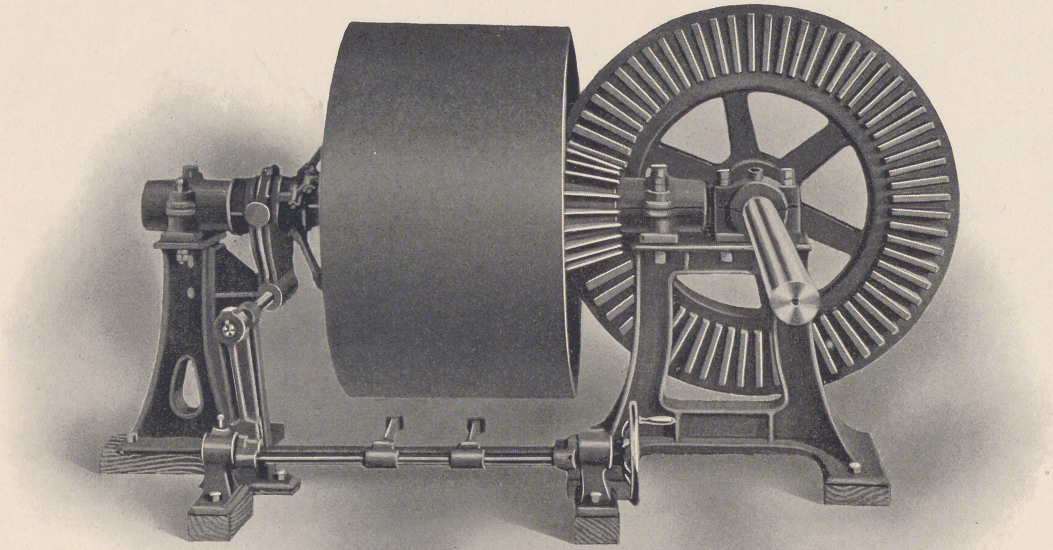
PAPER MACHINE MEDIUM WEIGHT FLOOR DRIVING.

This self contained floor drive of medium weight for machines for making tissues, and for machines requiring moderate speeds, and for slow going board machines, is very suitable. It is rigid and strong, and makes a satisfactory drive. We supply many drives of this description for the trade, and recommend it highly for the duty named above.

Regularly 5, 6 and 7 inch face bevel gears are used with this drive. The pulley is of the loose pulley type, well oiled and bushed with cast bronze, and with a good oil chamber for storage of oil. Clutches are fitted according to the power required. We sell many of these for improving old machines, and solicit this work from our customers.

We recommend this for speeds under 350 feet per minute. It is built with the same care we apply to all our work, and is just as good a drive in every way as our heavier drives, except it is not as strong or heavy, and not intended for extreme speeds, and the price is, of course, less.

Prices on application.



Light Floor Drive for Small Machine. Designed and Built by The Bagley and Sewall Company.

PAPER MACHINE LIGHT FLOOR DRIVING.

For slow going or light machines for tissue, or machines under 80 inches wide, we have the drive shown on opposite page. It is a good strong drive. This is the drive we built for our first paper machines, and was as good a drive at that date, 1889, as any built, and has retained all of its good features. The trade, however, has demanded faster machines, greater width, more material to stand the consequent strains, and we have met the demands as shown in the foregoing pages.

We have probably 500 sets of this driving in operation, and heartily recommend it for work that is suited to it, and it will return to the purchaser full value for his investment.

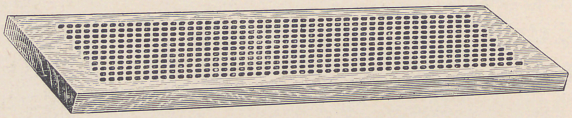
Comparison of this drive with the three preceding drives gives a fair idea of the progress of The Bagley & Sewall Company.

Price on application for single drives or for equipment of machines.

MAPLE WOOD SUCTION BOX COVERS.

The Hard Maple which we obtain is especially adapted to Suction Box Covers, and these we are constantly shipping all over the world. We ship these securely boxed and packed in shavings, which prevents their checking. We drill these covers in the manner shown in the cut, unless otherwise specified. We are prepared to make these covers any size and to any pattern of drilling that our customers desire. Can ship the day following the receipt of order.

Prices on application.



Hard Maple Suction Box Cover.

SUCTION BOXES.

We make suction boxes of bronze and wood, and are glad to quote for any width of machine.

BRASS, COPPER, IRON, WOOD, AND GALVANIZED IRON ROLLS.

We are constantly furnishing to the mills throughout the country tube rolls and felt rolls for Fourdriniers, Presses, Dryers, and for other purposes around paper mills. We are prepared to build these out of brass or copper tubing, steel or iron tubing, of white wood, and to funish our special galvanized felt rolls, which are machined first, and

GALVANIZED BY COLD PROCESS,

after the machining is done. This is a special equipment which we have, and has given excellent satisfaction. This is a large im-

provement over the old method of making galvanized rolls, when the galvanizing was done first, and the straightening of the roll and grinding it to make a surface, practically wore off all of the protection given by the galvanizing. Our new method is a great improvement.

We solicit this trade for any diameter or size of rolls, from any of the above materials. Also for bronze, iron, rubber press rolls, couch rolls and calender rolls.

A LETTER OF INTEREST

CONCERNING 585 FEET PER MINUTE.

Last October we visited the Remington-Martin Company, and were much interested to see our machine running at 540 feet per minute. A few days later we wrote that Company for some samples of paper made at 540 feet. The following reply was very gratifying to us.

C. R. Remington, President.
Charles H. Remington, Treas.
Francis M. Hugo, Sec'y.

Mills at Norfolk, N. Y.
REMINGTON MARTIN COMPANY,
Paper Manufacturers.

Norfolk, N. Y., Oct. 15, 1904.

The Bagley & Sewall Company, Watertown, N. Y.

Gentlemen:

I am sending you under separate cover some samples made on your 100" machine, at a speed of 585 ft. per minute. Trust that these will be satisfactory. I did not care to slow the machine down to 540 ft. in order to get samples out at that speed.

Yours truly,

THE REMINGTON-MARTIN CO.,

(Signed) A. J. Lewthwaite, Supt.

25 Three Pocket Grinders at St. Regis Paper Company. Designed and Built by The Bagley and Sewall Company.

MACHINERY FOR THE MANUFACTURE OF MECHANICAL WOOD PULP.

GRINDERS.

For more than forty years we have been building machinery for the manufacture of wood pulp, beginning with the introduction of the old Voelter Screw Feed machines, and advancing through the many stages of that famous machine into the field of Hydraulic Feed Machines. We have built grinders with every sort of attachment, and have seen the rise and fall of a great number of machines that were expected by their originators to be the death knell of the Bagley & Sewall grinders.

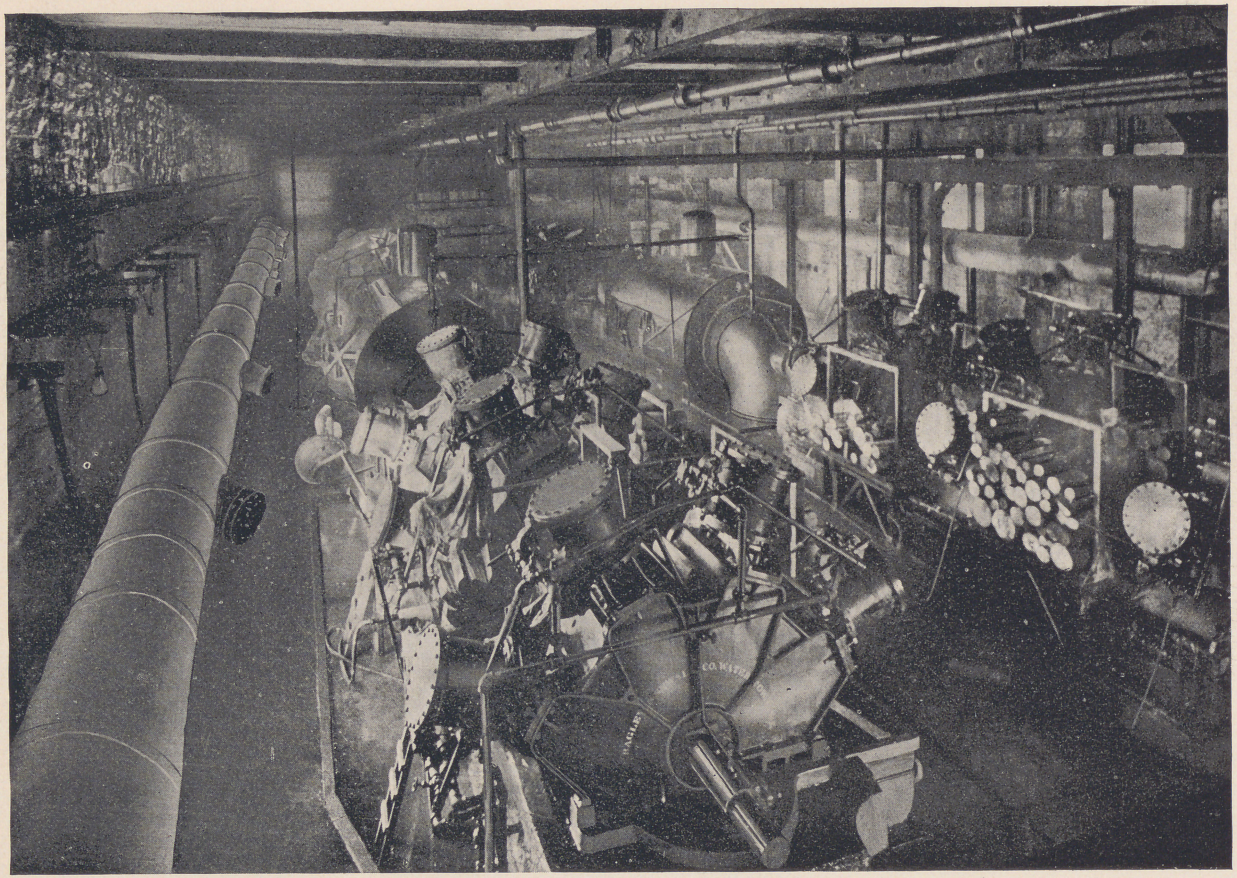
Our Grinder has withstood all tests, and the experience of forty years has enabled us to build the most compact, convenient and practical grinder on the market. It is simple, strong, and withstands the strains put upon such machinery.

The Cylinders, Bridge Trees, or Cross Supports, Side Frames, Bases and Bearings are all rigidly held together. Inside the grinder are steel plate pockets, adjustable as the stone wears. These pockets hold the wood to be ground. Curved serrated followers are used in all our grinders, brass cased pistons. Our piston rods do not extend through the top of the cylinder for the best reason in the world, we found that the additional stuffing boxes bound the piston, and that is one point where our grinder excels all others made. We get a more regular pressure on the wood, and consequently make a more uniform grade of pulp.

We have equipped some of the best pulp mills in the world, and take pleasure in giving on the opposite page a photograph of the St. Regis Paper Company's Ground Wood Mill, equipped with 25 of our three pocket machines, in five lines of five grinders each.

We build three-pocket and four-pocket Grinders. The former intended for power ranging from 350 to 450 Horse, and the latter for 500 to 700 Horse power.

25 Three Pocket Grinders at St. Regis Paper Company. Designed and Built by The Bagley and Sewall Company.



Twelve Four Pocket Grinders on 7200 Horse Power at Hannawa Falls Water Power Company, Potsdam, N. Y.
Designed and Constructed by The Bagley and Sewall Company.

CANADIAN TRADE.

We are glad to announce that Carrier, Laine & Co., Levis, Quebec, are prepared to build Grinders and Wet Machines, our entire line, for Canadian trade and trade among the English possessions where there is a preferential in favor of Canadian made machinery. The machines will be built by them from our drawings and they will have our full experience behind them, ensuring the production of machines of the high class that we build. Carrier, Laine & Co. are too well known throughout Canada to need any further introduction to the trade. We request the Canadian trade to negotiate with them.

HEAVY DUTY GRINDERS.

On the opposite page is a photograph showing an installation of twelve four-pocket machines, with 600 horse power each. There are two lines of 3600 Horse Power each.

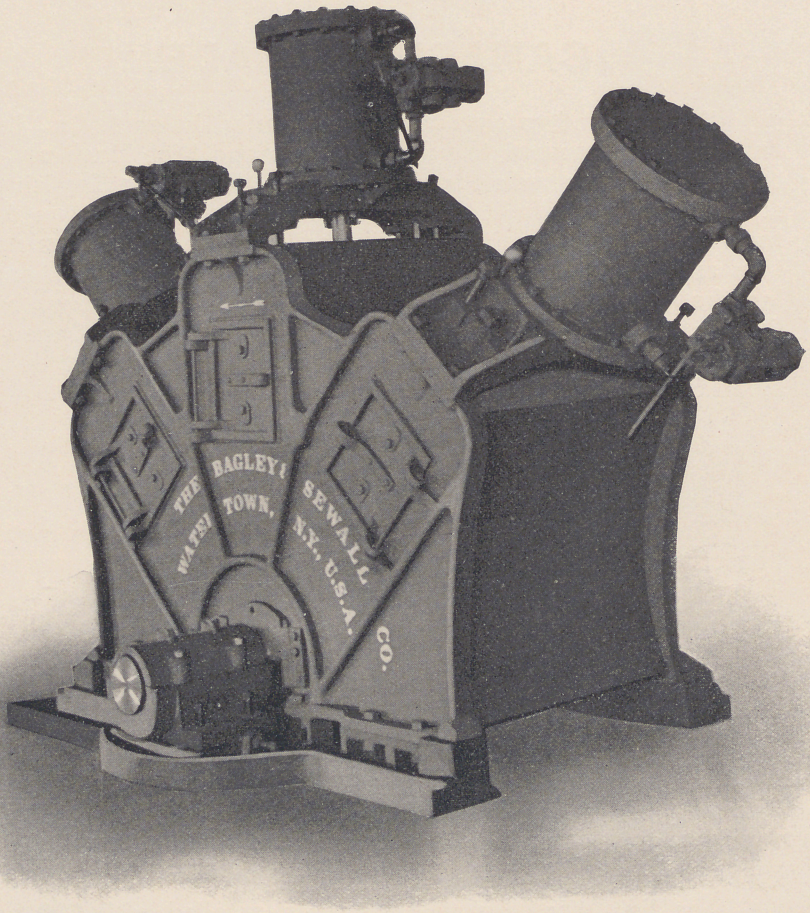
This mill operates under 95 feet head, and the cylinders were made 21 inches diameter so as to utilize the natural pressure from the penstock. The whole job is massive and especially arranged for the heavy duty. These machines produce from ten to twelve tons of pulp each daily.

This mill is completely equipped with our Grinders and Wet Machines, and is the greatest concentration of power on twelve stones in the world. This great power is held absolutely uniform and a constant speed is maintained.

The first Wood Pulp Grinder ever installed with 600 horse power on the stone is in the mills of H. Remington & Son Co. This was ten years ago. This machine has produced an average of 10½ tons daily of wood pulp ever since, and the repair parts have been practically nothing.

To give our prospective customers a fair idea of the strength of these machines, would say that one has been running with 742 horse power in the mill of the Dalton Power Co., for six or seven years, steadily and without extraordinary repairs.

Prices on application.



Three Pocket Grinder for Wood Pulp.
Designed and Built by the Bagley and Sewall Company.

THREE POCKET GRINDERS.

This machine is the strongest, best designed Wood Pulp Grinder on the market. The nearest constant pressure on the wood is obtained by our method of cylinder construction, and can be operated with the minimum amount of repairs.

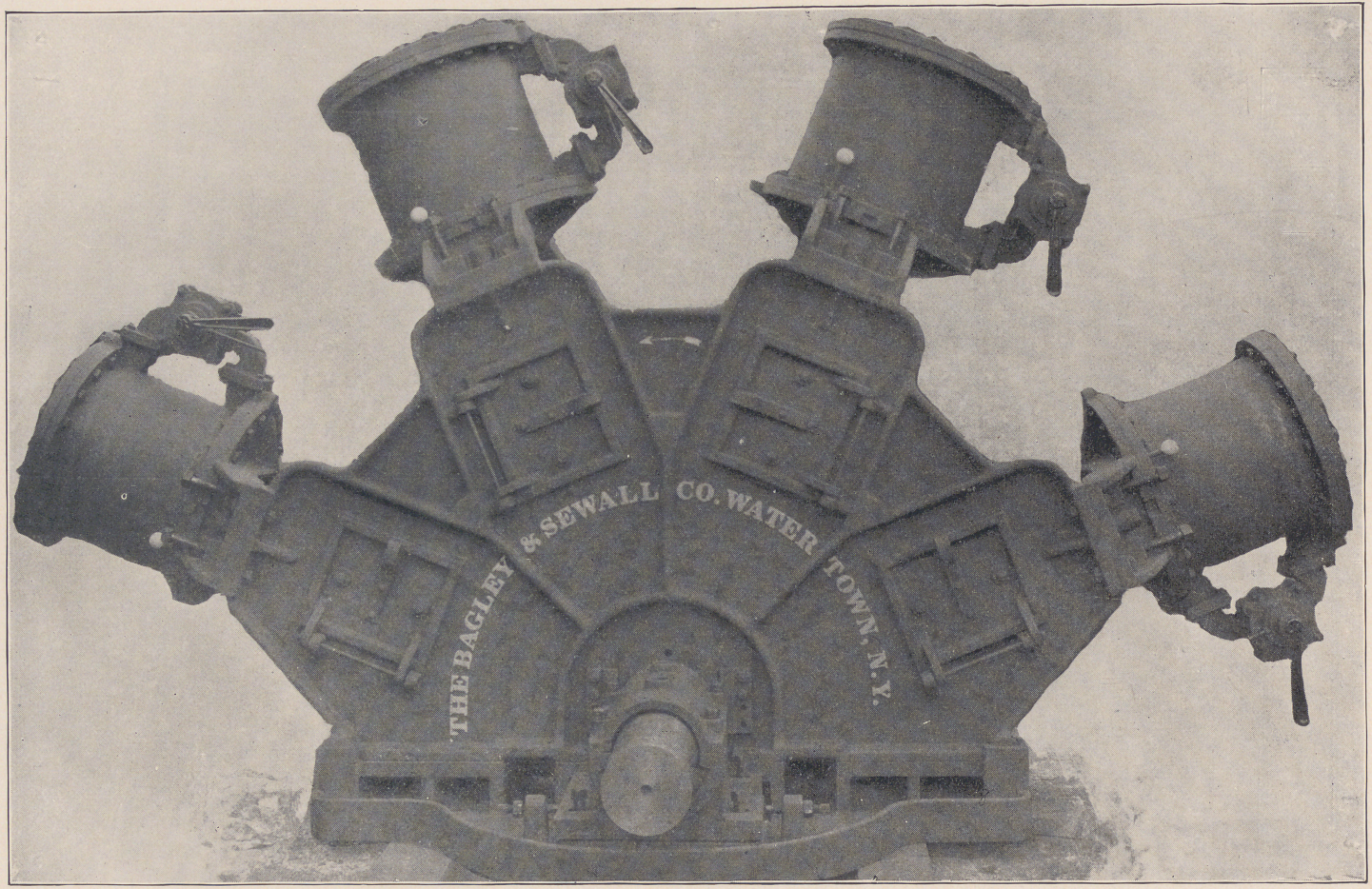
SPECIFICATIONS.

STONE:	26 or 27 inches face x 54 inches diameter.
SHAFT AT CENTER:	7½, 8½ or 9 inches diameters. The size determined by the power used and number of grinders in line. Shaft made of hammered steel or iron.
BEARINGS:	Water cooled, chain oiling, swivel, self-aligning, adjustable vertically and horizontally. Lining of bearings of babbitt, or maple wood on edges.
POCKETS:	Steel plate, put together with Norway iron bolts. These pockets are unbreakable even in case of accident to the pulp stones.
CYLINDERS:	Standard 16 inches diameter. Special sizes if desired. Cylinders of cast iron and lined with brass.
VALVES:	Piston type, arranged for single or double pressure.
FRAMES:	Cast iron, well ribbed and very heavy.
BRIDGE TREES:	Cast iron, very heavy, and ribbed, and arched so packing box on piston is exposed and can be repacked without disturbing balance of grinder.
PISTON ROD:	Brass cased, steel centers.
POCKET SCREW:	Tobin Bronze.
FOLLOWER:	Concave and corrugated surface.
COLLARS:	Cast steel 40 inches in diameter.
WEIGHT:	17,000 pounds.

Stone, piping and couplings not included in regular specifications.

Six or more grinders constantly ready for shipment.

Prices on application.



Four Pocket Wood Pulp Grinder.
Designed and Built by The Bagley and Sewall Company.

FOUR POCKET GRINDERS.

This machine is designed for very heavy units of power, and we recommend same where 500 to 600 horse power are desired on each stone. We have this grinder with 700 horse power, and it operates steadily without repairs.

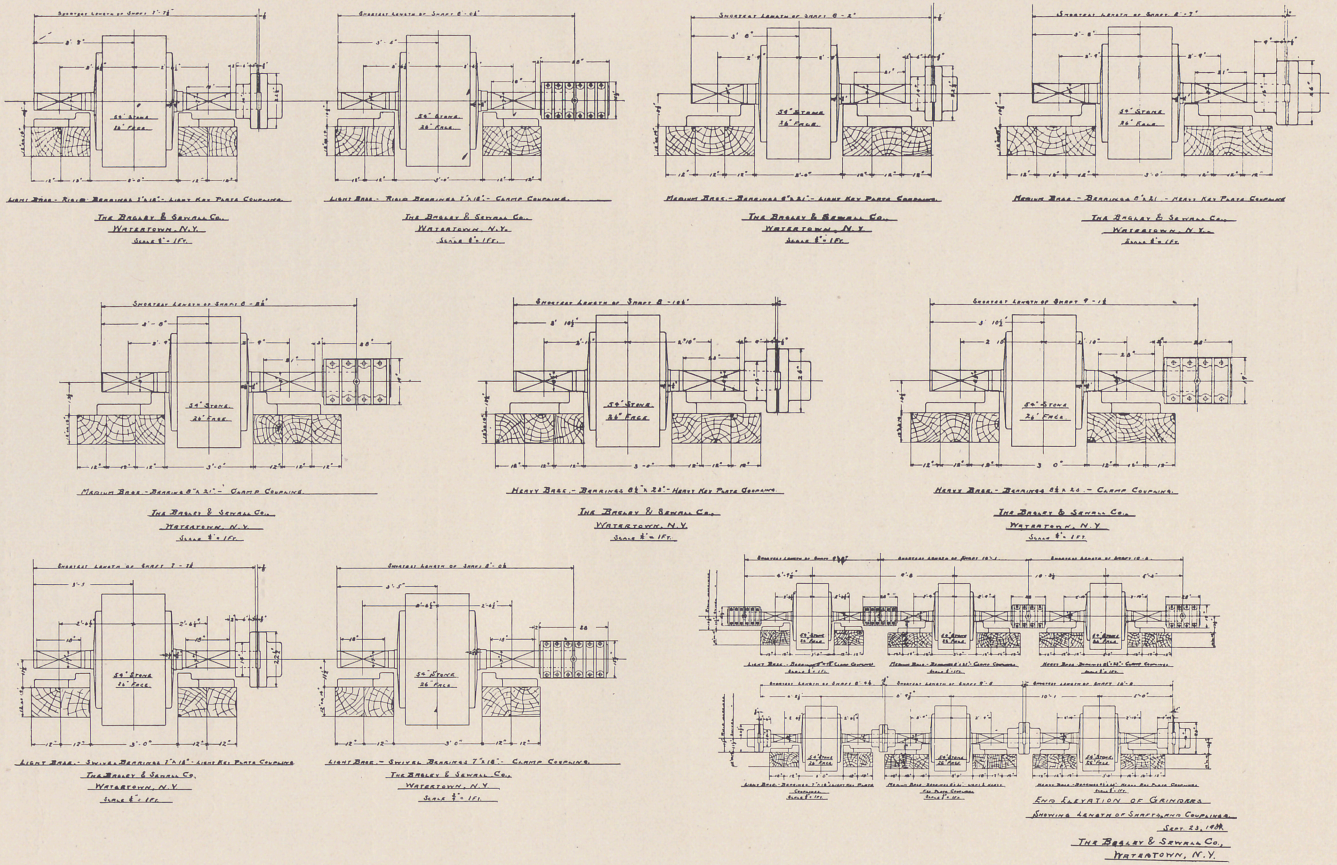
SPECIFICATIONS.

STONE:	26 or 27 inches face x 54 inches diameter.
SHAFT AT CENTER:	8½ or 9 inches diameter, determined by the power to be applied. Shaft of hammered steel or iron.
BEARINGS:	Water cooled, chain oiling, swivel, self-aligning, adjustable vertically and horizontally, lining of bearing of babbitt or maple wood on edge.
POCKETS:	Steel plate, put together with Norway iron bolts. These pockets are unbreakable, even in case of accident to the pulp stone.
CYLINDERS:	Standard 16 inches diameter. Special sizes if desired. Cylinders of cast iron and lined with brass.
VALVES:	Piston type, arranged for single or double pressure.
FRAMES:	Cast iron, well ribbed and very heavy.
BRIDGE TREES:	Cast iron, very heavy and ribbed and arched so packing box on piston is exposed, and can be repacked without disturbing the balance of the grinder.
PISTON ROD:	Brass cased, steel center.
POCKET SCREW:	Tobin Bronze.
FOLLOWER:	Surface concave and corrugated.
COLLARS:	Cast steel 40 inches in diameter.
WEIGHT:	18,500 pounds.

Stone, piping and coupling not included in regular specifications.

Six or more of these grinders constantly ready for shipment.

Designed and Built by The Bagley and Sewall Company.



Spacing for Three or Four Pocket Grinders. The Bagley and Sewall Company.

SPACING AND DETAILS.

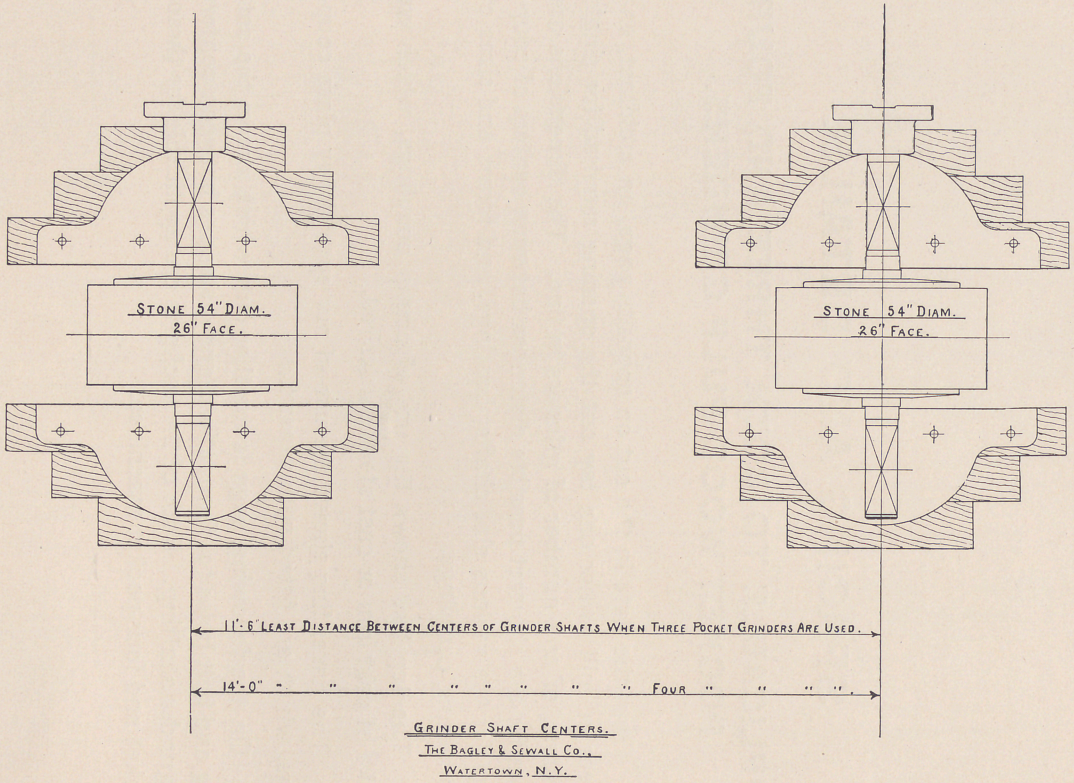
APPLICABLE TO BOTH THREE AND FOUR POCKET WOOD PULP GRINDERS.

From the data in the cut on opposite page, an architect, engineer or mill owner can lay out the spacing required for single grinders, or any number of grinders in line. The dimensions are given for the shortest possible distances between centers of couplings for the various size shafts, bearings, and forms and sizes of connecting couplings.

The top line shows the use of clamp couplings, which we make of cast iron or cast steel, as desired.

The lower line shows the use of our special key plate couplings, which are fitted with taper fits.

On the following page is another cut, which shows the setting and bolt holes for foundations and distances between centers of grinder shafting. Both of these charts are applicable for three-pocket and four-pocket machines.



Plan and Shortest Distances Between our Grinders. The Bagley and Sewall Company.

ACCESSORIES FOR PULP GRINDERS.

REGULATING VALVES.

We carry in stock pressure regulating valves for controlling the water pressure to the grinders, so that it can be regulated on each individual grinder, using a heavy pressure when stone is dull, and a light pressure when sharp, and at same time maintaining a constant pressure in water main supply.

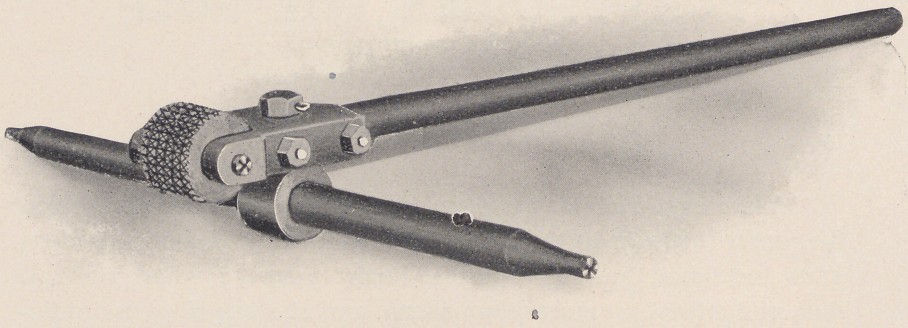
GRINDER VALVES.

Piston Valves of an improved variety, built of best materials and in a finished, workmanlike manner, carried on hand, designed to fit any make of grinder. These valves, while sold at the prices of cheaper valves, are far superior to any on the market.

GRINDER PARTS.

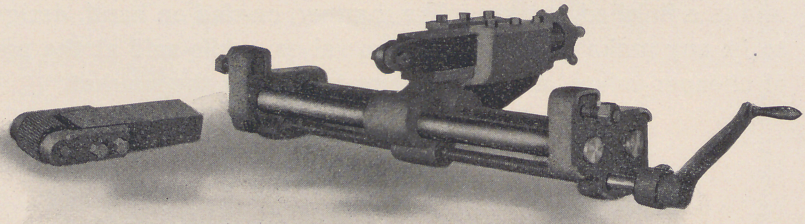
Grinder shafts, cast iron and cast steel stone collars, to order to fit any grinder on the market. Clamp couplings of cast iron and cast steel. Special key plate couplings. For these last, see page 122.

PULP STONE SHARPENING DEVICE.



The above cut shows our regular stone sharpening device, for slightly sharpening or burring the stone. The burrs are made from imported cast steel. These burrs we sell separate from the holders, cut to any desired number of threads or points to the inch.

PULP STONE TRUING MACHINE.



The above machine is designed by us for truing the pulp stone, which is absolutely necessary to good work, and also is fitted with sharpening burrs, and we recommend these be attached permanently to each grinder in a mill, saving much time in shifting from one machine to another, and being always ready, the stones thus receive more attention than where the operative has to re-equip his machine each day.

Prices on application.

WET MACHINES.

STANDARD SPRING PRESSURE, HYDRAULIC PRESSURE AND COMBINATION HYDRAULIC AND SPRING WET MACHINES.

The Bagley & Sewall Company's wet machines are known the world over. We have built them, as in the case of the wood pulp grinders, ever since the introduction of the wood pulp industry into this country.

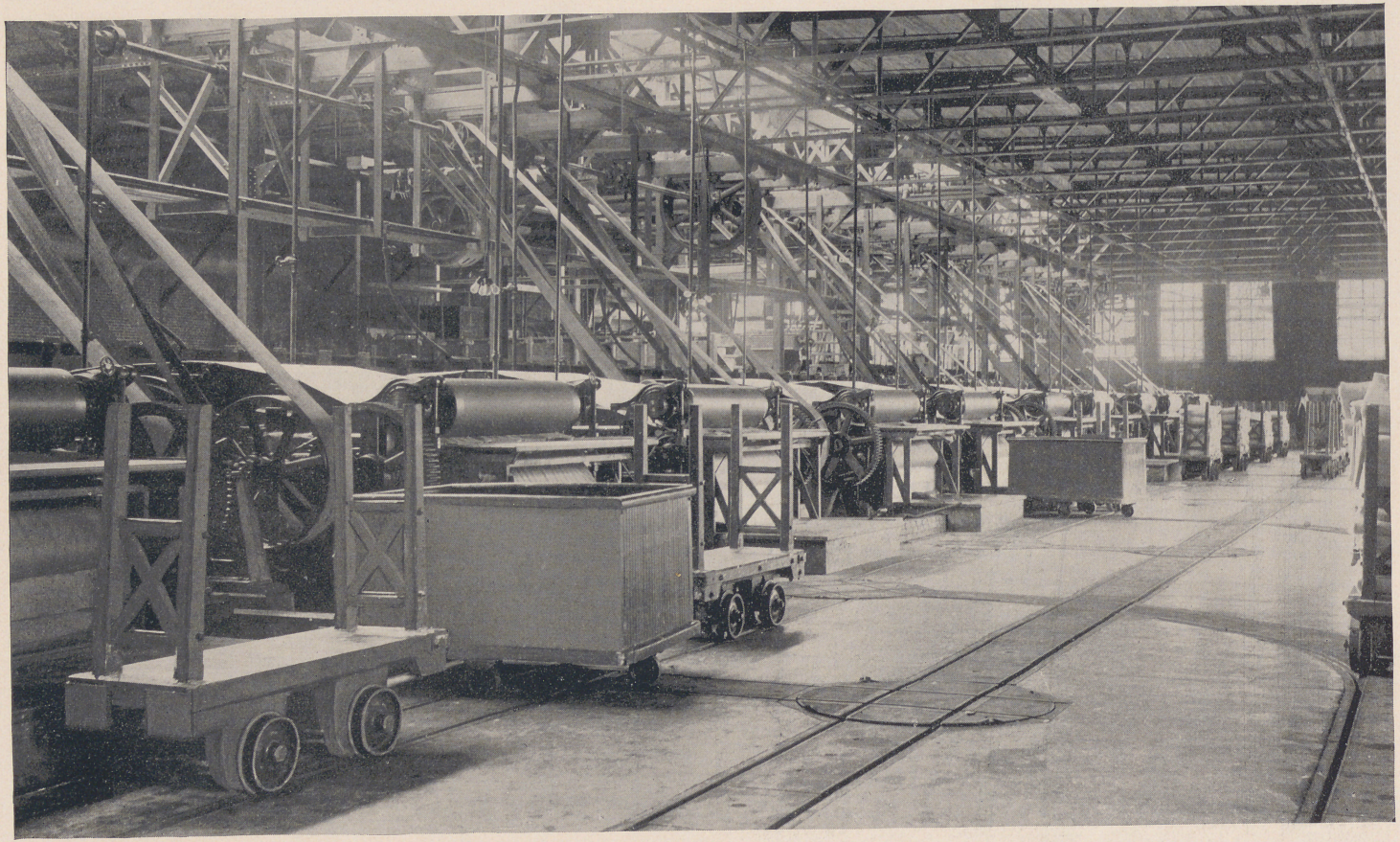
A number of years ago we took our Patents on our self-contained spring housing Wet Machine. It met with deserved success, and is the world's standard for such a machine.

We build Spring and Hydraulic Wet Machines regularly, and carry from six to a dozen of each kind in stock for immediate shipment, the standard size being 74 inches face of mould and 30 inches diameter. Moulds of larger diameters and wider machines built in short time to order.

The Combination Spring and Hydraulic Wet Machine is a new machine designed to meet the needs of parties who, at times ship pulp and at times consume it at the mill.

These Wet Machines are built by us with the same care and nicety that is so apparent throughout our Paper making machines. The stretchers are of regular Paper Machine construction and the rolls and bearings are of the same standard quality and workmanship.

Specifications for each machine will be found in the following pages.



Ten Hydraulic Wet Machines at Berlin Mills Company. Designed and Built by The Bagley and Sewall Company.

STANDARD SPRING PRESSURE WET MACHINES.

Nearly one thousand of these machines have been made and sold by us, and we believe that is two or three times the number ever sold from any one other design in the world. We are constantly shipping these machines to parties who have used same for years. This speaks volumes for their excellent points.

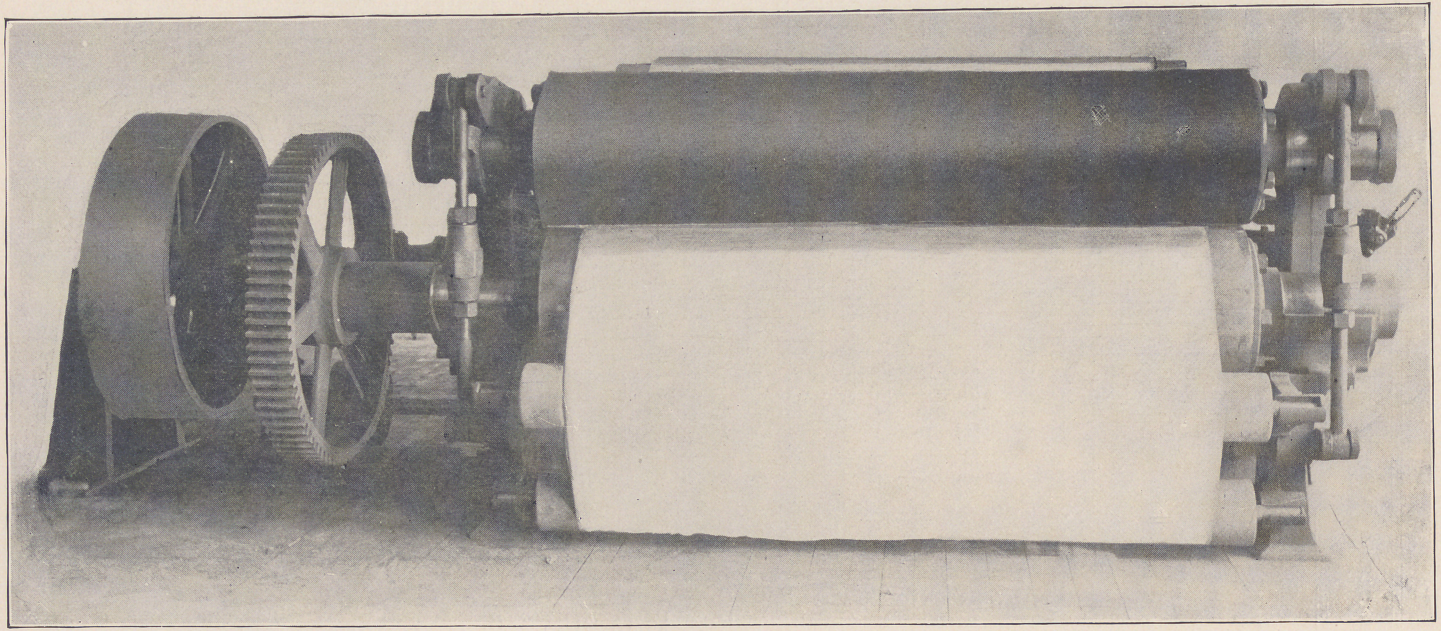
SPECIFICATIONS.

Standard width: 74 inch mould, 30 inch diameter.
Larger moulds if desired, extra.

VAT:	Pine, equipped with brass washout plugs and bearings for mould journals.
MOULD:	Brass spiders, brass cased shaft, brass foundation and face wires.
COUCH ROLL:	Standard is wood lagged on heavy spiders and shaft. Rubber or other couchers extra.
SQUEEZE ROLLS:	Turned steel. Rubber covered extra.
FELT ROLLS:	Steel and white wood.
PRESS ROLLS:	Hard Maple 17 inches diameter. Journals 6 x 8. Rods 1¼ inches diameter. Iron rolls if desired extra.
WHIPPER:	Four-barred, maple wood bars, heavy spiders and shaft.
HOUSINGS:	Patented self-contained style. Spring pressure, 8 tons on a side.
SUCTION BOX:	Wood, no piping.
DRIVING:	All floor driving included. Heavy gears. Large pulley with jaw clutch for stopping and starting machine. Friction clutch extra.
WEIGHT:	10,500 pounds.
HAND:	Are interchangeable to either right or left as desired.

Standard machines always on hand. Special machines built on short notice.

Prices on application.



Hydraulic Pressure Wet Machine. Designed and Built by The Bagley and Sewall Company.

HYDRAULIC WET MACHINES.

The pressure on the rolls of this machine is obtained by means of cylinders on either side of the machine. The cylinders are piped together so that this pressure is automatically and instantly equalized, enabling same total pressure to be brought on each end of the press rolls, and consequently from end to end. This is a heavy duty machine.

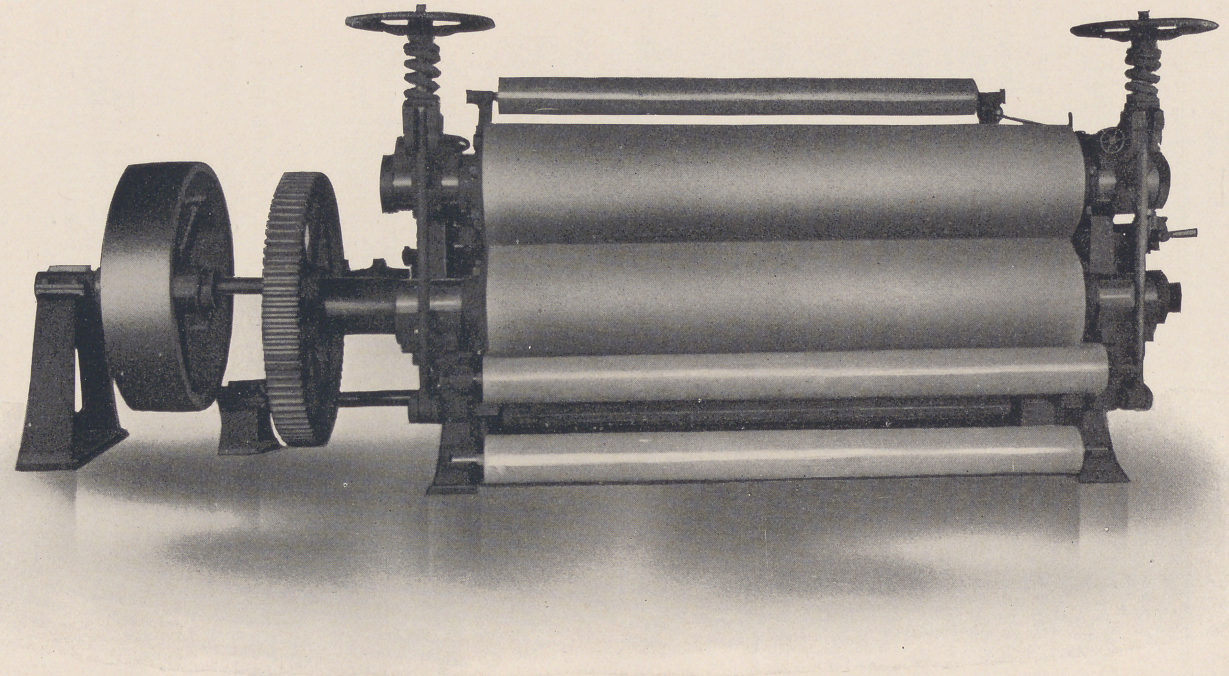
SPECIFICATIONS.

Standard Width: 74 inch mould, 30 inches diameter. Larger moulds if desired extra.

VAT:	Pine with brass washout plug and bearings for cylinder mould journals.
COUCH ROLL:	Standard wood lagged on heavy spiders and shaft. Rubber covered extra.
MOULD:	Brass spiders, brass cased shaft, brass foundation and face wires.
SQUEEZE ROLLS:	Turned steel. Rubber covered extra.
FELT ROLLS:	Steel and white wood.
PRESS ROLLS:	19 inches diameter. Hard rock maple. Journals 8 x 10. Six rods 1¼ inches in each roll, and one 2½ inch shaft through center of lower roll, fitted to bored holes in heads. Iron Rolls extra.
WHIPPER:	Four-barred wood.
HOUSINGS:	Hydraulic pattern. Heavy lever arm top and bottom boxes, water cooled. Cylinders 10 inches diameter, brass lined.
SUCTION BOX:	Wood, no piping.
DRIVING:	All floor driving included, and jaw clutch arrangement for stopping and starting machine. Friction clutch extra.
WEIGHT:	12,000 pounds.
HAND:	Are interchangeable to right or left hand.

Ten to twelve machines constantly in stock.

Prices on application.



Combination Spring and Hydraulic Pressure Wet Machine. Designed and Built by The Bagley and Sewall Company.

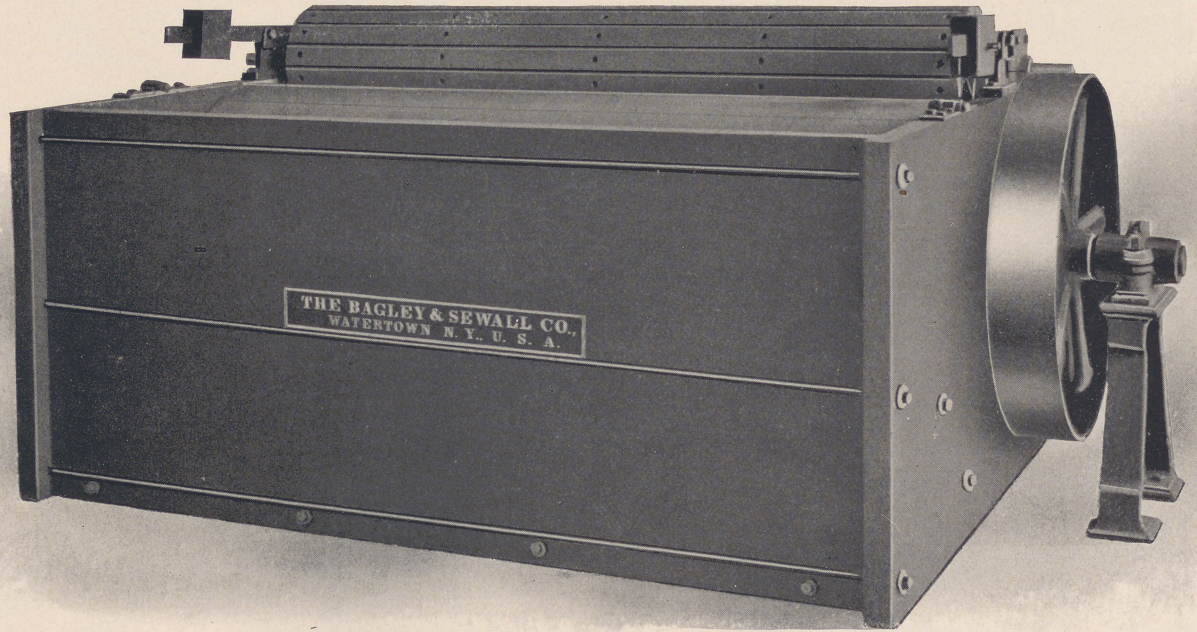
COMBINATION SPRING AND HYDRAULIC WET MACHINE

This machine is practically our standard Hydraulic Wet Machine, with the attachment of our spring device as shown in the photograph on the page opposite.

This machine can be operated as either a spring machine or a hydraulic machine, and where a mill is shipping pulp part of the time at a distance, and part of the time consuming the pulp at the mill, it is a very excellent combination.

This machine follows the hydraulic details, as named in foregoing page, and is regularly built in 74″ width of mould, but special sizes are built promptly to order, and with any special equipment as desired.

Prices on application.



Slushing Machine for Ground Wood Pulp. The Bagley and Sewall Company.

SLUSHING MACHINES.

Much labor, felts, and general expense can be saved in Paper mills, which produce all or part of their ground wood supply by the use of these automatic machines, which take out of the pulp a large percentage of the water used in grinding and screening, and drop the pulp into chests in a state sufficiently liquid to pump to the Beating Engines, thus avoiding the labor at the Beaters of loading the engine with laps, and saving much time, so that less beaters are required, and power is also saved over the old process of reducing laps.

The standard size of this machine is with a mould 30″ x 74″, but machines with larger diameter and longer faced moulds are constantly built by us.

Machines 86 inches wide, and 36 inch moulds are frequently ordered.

The machine is simplicity itself, and strong and conveniently constructed.

Mould is all of brass.

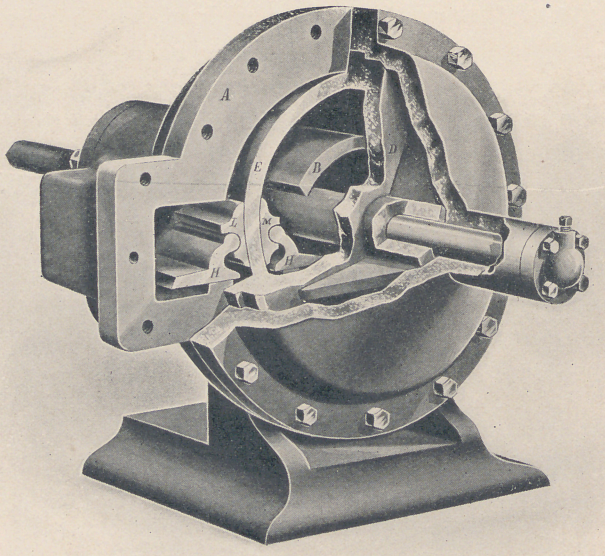
Couch roll wood lagged.

All driving on floor included.

Prices on application.

GREEN'S PATENT
ROTARY POSITIVE FORCE PUMPS.

BUILT BY
THE BAGLEY & SEWALL COMPANY.



Type A. Sectional View.

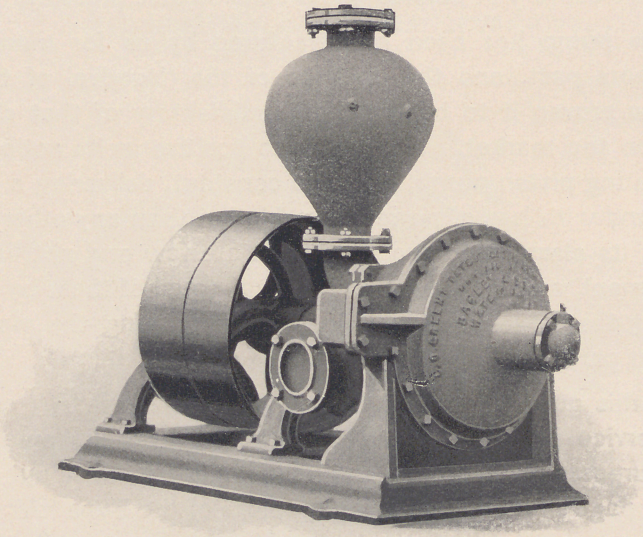
THE BAGLEY & SEWALL CO.'S ROTARY FORCE PUMPS

For Fire Protection, Mill Water Supply, or any purpose requiring the delivery of Liquids under considerable pressure.

This pump has been manufactured by us for more than thirty years past, and the doctrine of the "survival of the fittest" has proven it to be the most satisfactory of that class of pumps on the market. While it is as positive in its action as a reciprocating piston pump, it is also constant, delivering a steady stream and with less of power from friction than any other rotary pump of its class. The working parts are few and not liable to derangement, and free access can be had to all of them by simply removing the front cover, and without disturbing the piping or any other parts.

Of this pump we make two styles, one Type "A," or Constant Service Pump, and one Type "B" pump, for emergency or fire purposes, as described in pages following. The cut on the opposite page shows all the working parts of the Type "A" pump. "E" is an eccentric ring attached to the disc or plate D, the latter being keyed to the shaft. The valve consists of three parts, the outside tumbler L, the inside tumbler M and the slide HH. This slide travels back and forth with the throw of the eccentric ring, the tumblers, by a slight rocking motion, adjusting themselves to the varying angles of the eccentric during its revolution. The capacity of the pump is determined by the outer and inner lunar spaces between the eccentric and case A and the hub B. The decreased superficial area of the inner lunar space is exactly compensated for by making it deeper than the outer space, thus making the delivery constant and unvarying at all periods of revolution.

Details and price lists of rotary pumps on next pages.



Type A Rotary Force Pump for Constant Service.
The Bagley and Sewall Company,
Watertown, N. Y., U. S. A.

TYPE A.

ROTARY FORCE PUMP.

FOR CONSTANT SERVICE.

In this pump, as shown on opposite page, the valve travel is horizontal, the valve chamber is large, and the pump is exceedingly well adapted for pumping thick liquids or liquids containing solid matter in suspension, such as syrups, tan liquor, etc. Thousands of them are used by sugar refineries, distilleries and tanneries in the United States, West Indies and Central and South America. They are also used for condenser pumps.

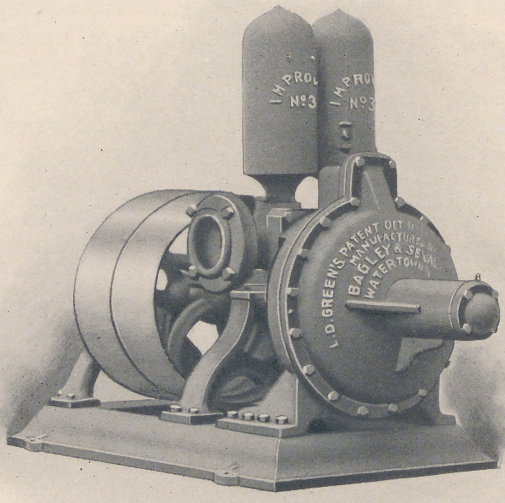
SIZES, CAPACITIES AND PRICES.

No. of Pump	Diameter of Pipes		Size of Pulleys		Revolutions for Ordinary Work
	Suction	Discharge	Diameter	Face	
1	1 in.	1 in.	10 in.	2¼ in	200 to 300
2	2½	2	14	4½	150 to 250
2½	3	2½	16	5	125 to 225
3	3½	3	18	6½	100 to 200
4	4½	4	20	8½	100 to 175
6	7	6	26	10½	100 to 150
8	10	8	30	12	75 to 110

No. of Pump	Gallons Discharged Each Revolution	Capacity at Full Speed Per Minute	Price	
			Iron	Bronze
1	.114	34 Gallons	$ 40 00	$ 80 00
2	.385	96 "	75 00	150 00
2½	.832	187 "	100 00	200 00
3	1.32	264 "	125 00	250 00
4	2.22	388 "	200 00	350 00
6	5.65	847 "	400 00	
8	12.19	1340 "	700 00	

Sizes 1, 2, 2½, 3 and 4 are fitted with tight and loose pulleys.

GREEN'S PATENT ROTARY FORCE PUMP.



Type B.
Rotary Pump for Emergency or Fire Purposes.
The Bagley and Sewall Company,
Watertown, N. Y., U. S. A.

TYPE B.

ROTARY FORCE PUMP.

FOR EMERGENCY OR FIRE PURPOSES.

This pump has two air chambers (see cut opposite) the valve travel is vertical, and while it may be used for constant service for water only, it is especially designed for a Fire Pump. As each revolution delivers an exact quantity, the capacity of the pump for one revolution being known the total delivery per minute is easily ascertained. For instance, the No. 5 Pump delivers two and one-half gallons at each revolution. At the proper emergency speed, say 250 r. p. m., it will deliver 625 gallons per minute at any usual fire pressure, the latter depending upon the amount of power supplied.

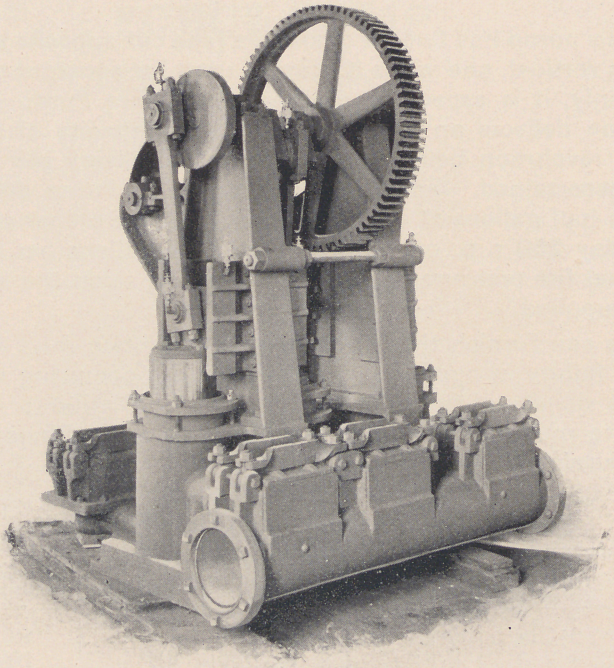
We can furnish these pumps with a friction drive to provide against failure in operation in case of a fire occurring in the immediate vicinity of the pump. The additional price for such friction drive must depend upon the surroundings. Plans and estimates furnished upon application.

SIZES, CAPACITIES AND PRICES.

No. of Pump.	Diameter of Pipes		Size of Pulleys		Revolutions for Ordinary Work
	Suction	Discharge	Diameter	Face	
2	2½ in.	2 in.	14 in.	4½ in.	150 to 250
3	4	3	18	6½	100 to 250
4	5	4	20	12	100 to 225
5	6	5	24	12	100 to 200
6	8	6	26	12	100 to 150

No. of Pump	Gallons Discharged Each Revolution	Capacity at Full Speed Per Minute	Price	
			Iron	Bronze
2	.50	125 gallons	$100 00	$175 00
3	1.00	250 "	150 00	250 00
4	1.50	338 "	225 00	350 00
5	2.50	500 "	325 00	
6	4.00	600 "	425 00	

Sizes 2 and 3 are fitted with tight and loose pulleys.



Style A. 10″ x 10″ Triplex Stuff Pump.
The Bagley and Sewall Company,
Watertown, N. Y., U. S. A.

THE BAGLEY & SEWALL COMPANY STUFF PUMPS.

STYLE A, 10" X 10" TRIPLEX.

The enormous quantity of stuff required by the wide, fast running paper machines, and the transferring of ground wood and sulphite to the machine room from slusher chests, involve the use of stuff pumps of large capacity and constructed in the best manner. A number of years ago we felt that there was no pump built by the regular pump manufacturers that properly covered the ground, and we built the stuff pump shown on the opposite page, in a size 10″ stroke, 10″ diameter, triplex plungers, to overcome the difficulties and fearful annoyances and expensive delays caused by stuff pumps. We have met with success, and these pumps are in use in many of the best mills in the United States and Canada.

This pump is especially for paper mill uses and requirements.

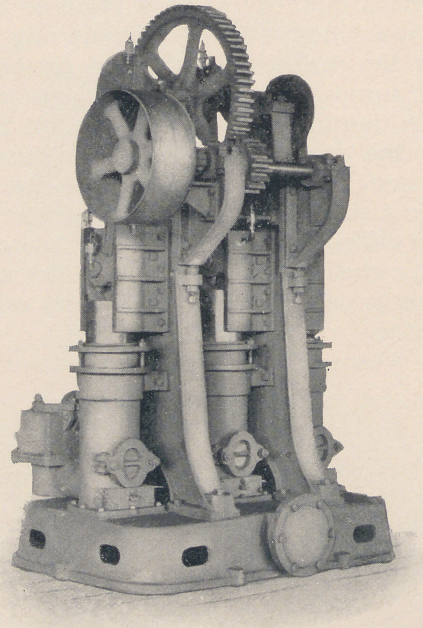
SPECIFICATIONS.

PLUNGERS:	Cast iron, brass cased.
CONNECTING RODS:	Wrought iron, with brass marine ends.
CRANK SHAFT:	Forged steel.
GEARS:	Cut 5 inch face, 84 teeth.
PINIONS:	Cut 5 inch face, 17 teeth.
RATIO:	4.49 to 1.
CROSS HEAD:	Very strong and convenient.
GUIDES:	Cast iron, well lubricated.
VALVES:	Brass balls, instantly accessible. Our special arrangements of balls and seats make the balls last longer than on any other make of pump.
INLETS:	10 inches diameter.
DISCHARGE:	8 inches diameter, passages easy curves, well rounded, to prevent lodgment of stuff.
PULLEY:	26 inches diameter x 10½ inches face.
WEIGHT:	9,000 pounds.

This pump will throw stock for 45 tons finished paper.

Pumps can be driven from either side as desired. Six to eight always ready to ship. One of our specialties.

Prices on application.



Style C. 8″ x 10″ Triplex Stuff Pump.
The Bagley and Sewall Company,
Watertown, N. Y., U. S. A.

THE BAGLEY & SEWALL COMPANY STUFF PUMPS.

STYLE C.—ON OPPOSITE PAGE.

For machines of moderate capacity or of widths under 112 inches, we build the same grade of pump as the above, but in different style, in the size 8 x 10 triplex. Like the pump above, it possesses all the details which form a high class pump.

Both pumps are intended to be as near absolute perfection and reliability as experience and knowledge and skill can make them, and thus eliminate the vexatious and expensive delays in paper mills due to inferior stuff pumps. This pump can be driven from either side. The cut at the left represents this pump.

SPECIFICATIONS.

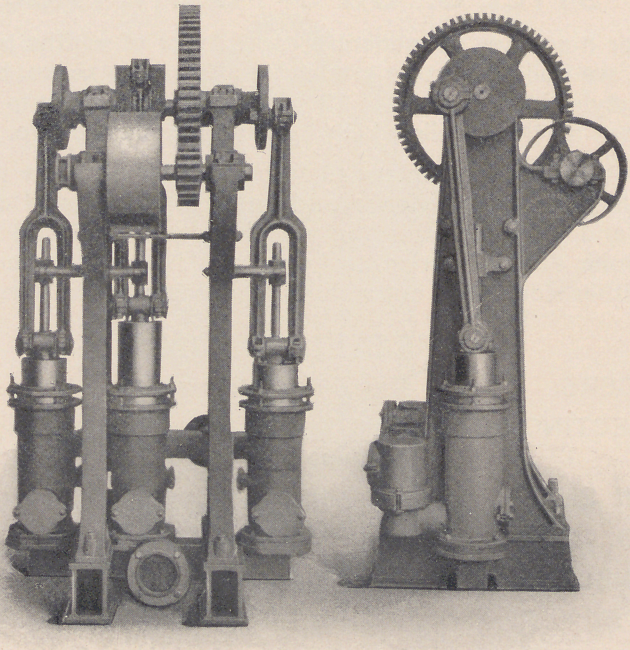
PLUNGERS:	Cast iron, brass cased.
CONNECTING RODS:	Cast iron with marine ends lined with genuine babbitt.
CRANK SHAFT:	Forged steel.
GEARS:	Cut 3½ inch face.
PINIONS:	Cut 3½ inch face.
RATIO:	3.88 to 1.00.
CROSS HEAD:	Bored and well lubricated.
VALVES:	Brass ball valves. Quick opening chambers.
INLET PIPE:	8 inches diameter.
OUTLET PIPE:	8 inches diameter.
PULLEY:	18 x 8 inches.
WEIGHT:	7,000 pounds.

This pump for machines making 15 to 20 tons per day.

Pump can be driven from either side.

Six or more always ready to ship. One of our specialties.

Prices on application.



Style B. Stuff Pump.
The Bagley and Sewall Company,
Watertown, N. Y., U. S. A.

THE BAGLEY & SEWALL STUFF PUMPS.

STYLE B, TRIPLEX AND DUPLEX.

The cut at the left shows a cheaper pump than the styles A and C. Our style B stuff pump, which, for many years, was the standard Stuff Pump of the United States, is yet desired by many mills where the duty is not severe enough to require the pumps on the preceding pages. Of this style we have probably 500 in use, and they are well fitted for machines making ten to sixteen tons of paper daily. We build them in four sizes. Shipping weights follow each size.

Duplex 6″ x 10″, 4,200 lbs. Triplex 6″ x 10″, 4,500 lbs.

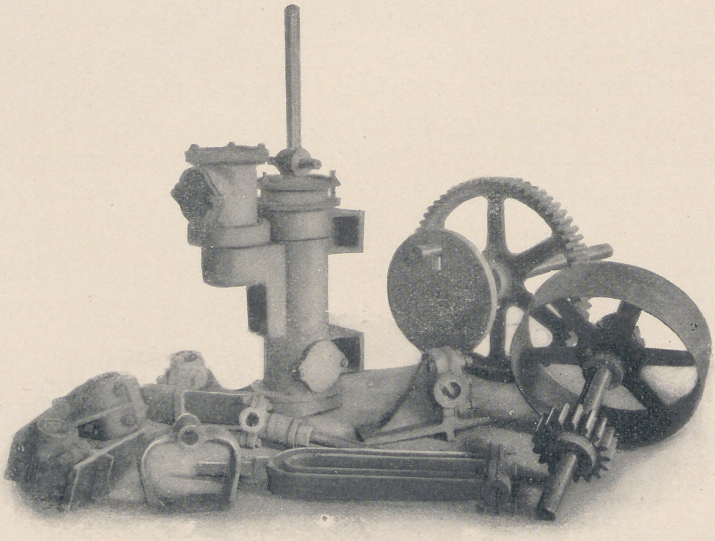
Duplex 8″ x 10″, 4,400 lbs. Triplex 8″ x 10″, 4,600 lbs.

The Triplex 8″ x 10″ we carry in stock and can ship on receipt of order. The other sizes we carry knocked down, and can ship in two to three weeks after order.

SPECIFICATIONS.

PLUNGERS:	Brass cased, centers of cast iron.
VALVES:	Brass ball valves, quick opening chambers.
CONNECTING RODS:	Cast iron.
SHAFT:	Forged steel.
GEARS:	3½ inch face, 66 teeth, cast from iron patterns.
PINIONS:	3½ inch face, 17 teeth, cast from iron patterns.
RATIO:	3.88 to 1.
PULLEY:	18″ x 8″ face.

Prices on application.



Single Plunger Post Stuff Pump.
The Bagley and Sewall Company,
Watertown, N. Y., U. S. A.

THE BAGLEY & SEWALL COMPANY SINGLE PLUNGER POST STUFF PUMPS.

Completing our line of stuff pumps, we make single plunger pumps for attaching to posts. These pumps are built and carried in stock in two sizes, namely, 6″ x 14″ stroke, and 8″ x 14″ stroke. The stroke of these pumps is adjustable by varying the position of the connecting wrist pin on the crank disc.

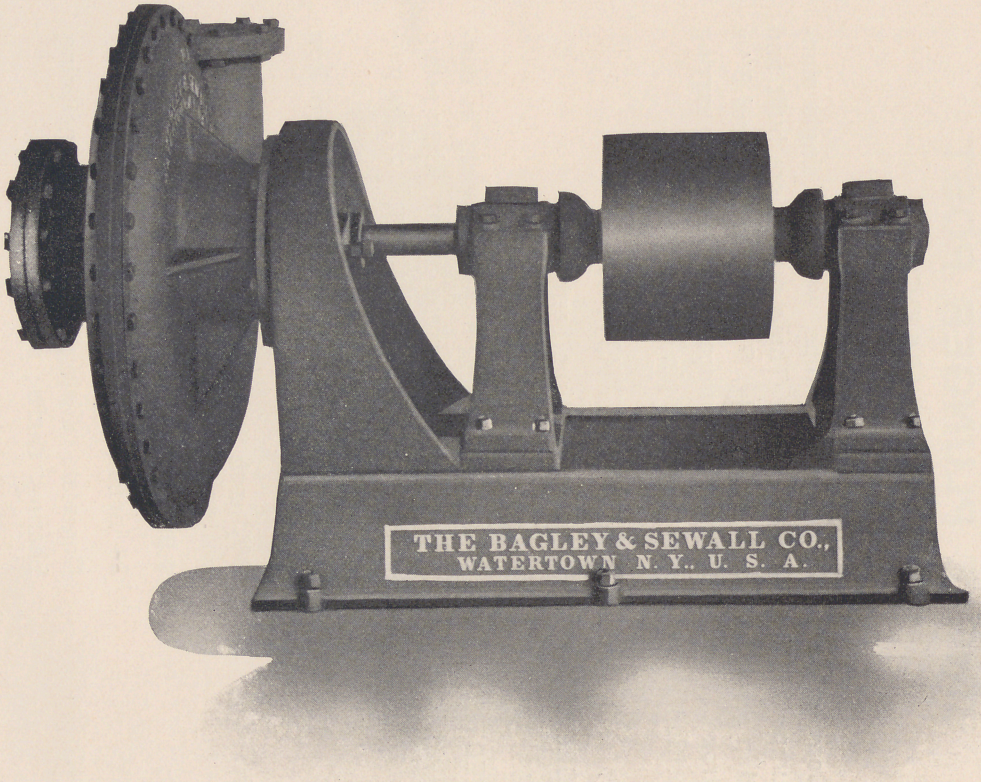
SPECIFICATIONS.

PLUNGERS:	Brass cased, iron centers.
VALVES:	Brass balls.
CONNECTING ROD:	Stub-ends are furnished to weld in connecting rod of desired length when pump is mounted on post in the mill of the purchaser.
GEAR:	3½ inch face, 66 teeth, cast from iron patterns.
PINION:	3½ inch face, 17 teeth, cast from iron patterns.
RATIO:	3.88 to 1.00.
PULLEY:	24 inches diameter x 8 inches face.
DRIVING:	Complete driving is furnished including bearing, shafts, pulley and gears.

Prices on application.

Shipping weights, 8 x 14, 2,000 pounds.

Shipping weights, 6 x 14, 1,800 pounds.



The "Bagley" Centrifugal Pump. The Best Pump Made. The Highest Efficiency.
Designed and Built by The Bagley and Sewall Company.

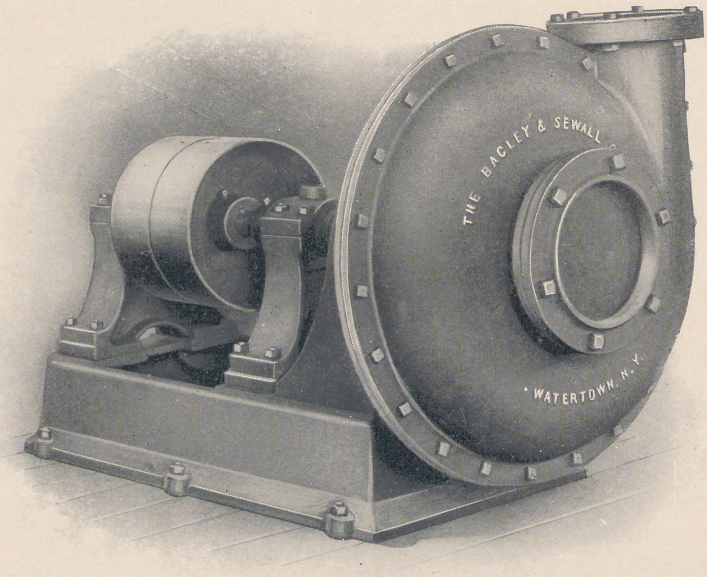
THE BAGLEY & SEWALL COMPANY CENTRIFUGAL AND FAN PUMPS.

By exhaustive scientific tests our Centrifugal Pump has shown itself to be designed on correct lines. Its efficiency in delivering liquids is higher than the commercial pump sold by most manufacturers; we believe there are no other pumps made that will give an equal amount of water for the power consumed. This result is obtained by certain principles embodied in our pumps, which we know to be positively better than other makers.

The cut opposite this page shows our Centrifugal Pump. In the Centrifugal Pump the spider or piston runs closer to the cases than in the Fan Pump. The Centrifugal Pump is preferable for water supply, and the Fan Pump for raising stock from pulp grinders, etc. The claims for our pumps are simply that the design makes them the most efficient on the market. Next, the mechanical construction is of the best. The cases are turned inside, and all joints are faced and made metal to metal. Shafts are of steel and of large diameter. Shaft, pulley and spider all balance, insuring steadiness under high speed. Bearings are long, genuine babbitted, provided with brass oilers. Flanges with standard holes for both suction and discharge are furnished with every pump. Packing boxes are split and brass lined. The discharge can be set in twelve different directions, varying by 30 degrees. The centrifugal pump can be changed from right to left hand, or vice versa, by reversing the cases and putting in new spider. The Fan Pump can be changed from right to left hand, or vice versa, by simply reversing the cases and spiders. We have thousands of these pumps in use, and we never lost a customer who once tried them. Prices on application.

Use the Centrifugal Pump for pumping water or liquid that is free from sticks or lumps.

Use the Fan Pump for stock or water containing sticks or other solid matter.



Special Fan Pump. Right Hand.
For Thick Stock, Wood Pulp From Grinders and Slushing Machines.
The Bagley and Sewall Company.

CENTRIFUGAL AND FAN PUMPS.

PRICES, SIZES AND CAPACITIES.

No. of Pump	Size of Pipe		Capacity Gallons per Minute		H. P. Per Foot Lift for Economical Capacity	Price of Pumps		Price of Foot Valve, Iron	Shipping Weight
	Suction	Disc'ge	Total	Economical		Iron	Brass		
1½	2	1½	150	65	.024	$ 35 co	$ 65 00	$ 3 50	285
2	3	2	300	110	.040	70 00	125 00	4 00	335
2½	3½	2½	400	150	.054	80 00	150 00	4 50	360
3	4	3	650	225	.081	95 00	175 00	5 00	380
4	5	4	1250	400	.144	130 00	275 00	6 00	600
5	6	5	1850	625	.225	165 00	350 00	8 00	900
6	8	6	2600	900	.325	200 00	410 00	10 00	1250
8	10	8	4800	1600	.578	310 00		15 00	1900

The economical capacity is based on velocity of flow in discharge pipes of ten (10) feet per second.

For table of Speeds, Pulleys, etc., see next page.

THE BAGLEY & SEWALL CO.'S CENTRIFUGAL AND FAN PUMPS.

Proved to be the most efficient of this class of Pumps built, giving the most water for the power consumed.

TABLE GIVING DIAMETER AND FACE OF PULLEYS AND REVOLUTIONS PER MINUTE NECESSARY TO RAISE WATER TO GIVEN HEIGHT.

No. of Pump	Economical Capacity in Gallons Per Minute	HEIGHT IN FEET AND REVOLUTIONS PER MINUTE												PULLEYS FOR CENTRIFUGAL PUMPS		PULLEYS FOR FAN PUMPS		No. of Pump
		12	16	20	25	30	35	40	45	50	60	70	80	Diameter	Face	Diameter	Face	
1½	65	600	681	750	826	890	950	1000	1060	1110	1205	1290	1375	6	6			
2	110	480	530	585	640	670	735	780	820	860	935	1000	1075	7	7			
2½	150	437	495	545	580	628	675	710	746	785	850	910	970	8	7			
3	225	405	450	493	533	572	616	645	675	708	766	820	868	8	7	11	7	3
4	400	350	422	458	496	530	564	596	623	650	705	766	780	10	8	13	8	4
5	625	372	382	415	450	478	506	535	560	585	630	705	710	12	10	13	8	5
6	900	310	330	357	385	410	445	456	478	500	540	630	615	14	12	15	11	6
8	1600	265	280	300	325	350	370	390	415	440	465	540	520	16	12	16	12	8

THE
BAGLEY & SEWALL COMPANY.
WATERTOWN, N. Y.

POWER TRANSMISSION

PULLEYS, HANGERS,
PILLOW BLOCKS, SPECIAL PEDESTALS, SHAFTING,
COUPLINGS, COLLARS, GEARING,
FRICTION CLUTCHES, ETC.

LARGE GATE VALVES FOR PAPER AND PULP MILLS A SPECIALTY.

GENERAL REPAIR WORK
WE GIVE ALL ATTENTION TO, AND CARRY THE LARGEST
GENERAL SUPPLY STOCK OF
BOLTS, NUTS, SCREWS, SHAFTING,
HANGERS, ETC.
IN NORTHERN NEW YORK.

SHAFTING.

We manufacture shafting from the old fashioned wrought iron, from open hearth steel, and from hammered steel. We do not use Bessemer steel or cold rolled steel. In connection with our paper making machinery we have found that both of the last named varieties are absolutely uncertain, and have nothing but their cheapness to recommend them. We would not put a Bessemer or cold rolled shaft in our own factories, and we do not desire to sell them to our customers. This makes the cost of our shafting undoubtedly higher than the prices asked "for shafting" by other parties, but the quality is such that the customer can better afford to pay two or three times the difference and secure the proper material.

We make all of our shafting so that a pulley bored for that particular size of shaft will fit at any point from end to end.

PRICE LIST OF FINISHED SHAFTING.

TURNED ACCURATELY TO GAUGE.

Diameter	Weight per Foot	Price per Foot	Keyway per Foot Net	Diameter	Weight per Foot	Price per Foot	Keyway per Foot Net
1 3/16	3.77	$0.80	$0.40	3 7/16	31 58	$ 3.00	$0.80
1 7/16	5 52	.85	.40	3 11/16	36.31	3 45	.90
1 11/16	7.61	1.00	.45	3 15/16	41.04	4 10	.90
1 15/16	10.03	1.10	.50	4 1/2	52.62	6.00	1.00
2 3/16	12.80	1.30	.55	5	66.35	8.25	1 25
2 7/16	15.89	1.65	.60	5 1/2	80.30	10.00	1.50
2 11/16	19.31	1.90	.65	6	95.55	12.50	2.00
2 15/16	23.06	2.15	.70	6 1/2	112.16	14.50	2.50
3 3/16	27.16	2.50	.75	7	130.04	17.00	3.00

The above price includes key seating for all Couplings furnished by us. Discount per cent.

FLANGE OR PLATE COUPLINGS.

All our flange couplings have the shafts taper fitted.

Keyseats and fitting to shafts included in price when shafts are purchased at same time from us.

All couplings fitted with turned bolts.

Diameter of Shaft	Price Fitted	Diameter of Shaft	Price Fitted	Diameter of Shaft	Price Fitted
1 7/16	$10 00	2 15/16	$21 00	4 7/8	$ 60 00
1 11/16	11 00	3 3/16	25 00	5 3/8	74 00
1 15/16	12 00	3 7/16	29 00	5 7/8	88 00
2 3/16	13 50	3 11/16	34 00	6 3/8	102 00
2 7/16	15 00	3 15/16	38 00	6 7/8	117 00
2 11/16	17 50	4 7/16	43 00	7 3/8	135 00

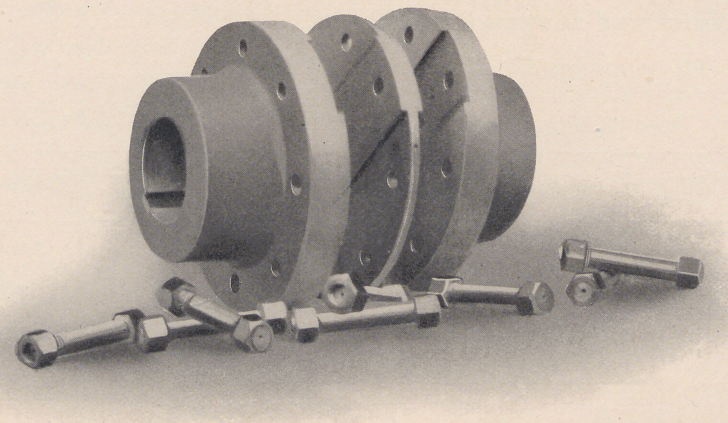
Discount per cent.

SPECIAL CLAMP COUPLINGS.

For heavy connections, such as on pulp grinders and shafts 6″, 7″, 8″ and 8½″ diam., we make heavy clamp couplings of cast iron or of cast steel, with a key in each half of the coupling. They are put together with heavy turned bolts.

Prices on application.

THE BAGLEY & SEWALL COMPANY SPECIAL KEY-PLATE COUPLINGS.

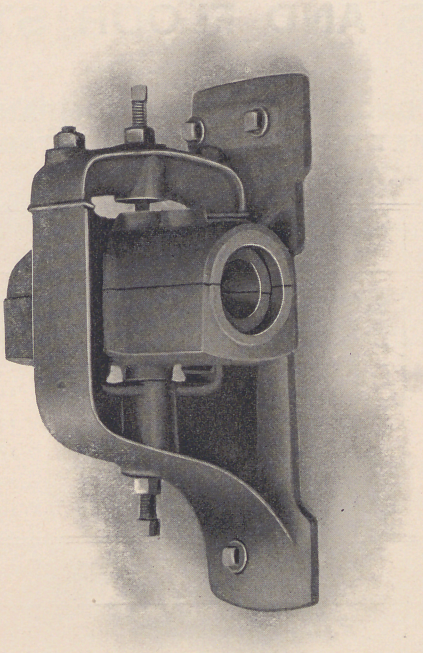


For pulp grinders where two or more are connected on one line, we developed what we term a Key Plate Coupling, which is the strongest driving coupling made. It is fitted, as couplings should be, with taper fits, and by removing the key plate, each separate grinder shaft can be removed without moving endwise the other shafts in the line.

These are applicable to generator, water wheel, engine and dynamo work.

Built regularly for 6″, 7″, 8″ and 8½″ diameters of shaft. Special sizes to order. Prices on application.

POST HANGERS.



THE BAGLEY & SEWALL COMPANY'S PRICE LIST ON BALL AND SOCKET CHAIN FEED POST HANGERS.

Diameter of Shaft	Price	Diameter of Shaft	Price
$1\frac{1}{1}5$	$ 6 50	$4\frac{7}{1}6$	$ 42 50
$2\frac{7}{1}$	9 50	$4\frac{1}{1}\frac{5}{6}$	52 50
$2\frac{1}{1}5$	14 00	$5\frac{3}{8}$	70 00
$3\frac{3}{1}$	16 50	$5\frac{7}{8}$	85 00
$3\frac{7}{1}6$	22 00	$6\frac{3}{8}$	100 00
$3\frac{1}{1}\frac{1}{6}$	27 00	$6\frac{7}{8}$	120 00
$3\frac{1}{1}\frac{5}{6}$	35 00		

Discount per cent.

HANGERS AND FLOOR STANDS.

PRICE LIST
THE BAGLEY & SEWALL COMPANY
BALL AND SOCKET RING OILING ADJUSTABLE HANGER AND FLOOR STAND.

Diameter of Shaft	1 7/16	1 15/16	2 3/16	2 7/16	2 15/16	3 3/16
9 inch drop	5 50	6 75	8 25	9 25	13 25	15 00
12 " "	6 00	7 50	8 75	9 75	14 25	16 75
15 " "	6 50	8 00	9 50	11 00	15 00	17 50
18 " "	7 00	8 50	10 25	13 00	16 00	18 50
21 " "	7 50	9 00	11 00	15 00	17 00	20 00
24 " "	8 00	10 00	12 00	16 50	18 00	21 50
30 " "		11 50	13 00	18 00	20 50	24 50
36 " "			16 00	21 00	23 00	27 00

Diameter of Shaft	3 7/16	3 15/16	4 7/16	4 15/16	5 3/8	5 7/8
9 inch drop	21 00	26 00				
12 " "	22 50	27 50	35 00	40 00	48 00	59 00
15 " "	23 50	29 00	36 00	42 00	52 00	62 00
18 " "	25 00	30 00	37 50	45 00	56 00	66 00
21 " "	26 75	32 00	39 00	48 00	60 00	70 00
24 " "	29 00	35 00	40 50	52 00	66 00	80 00
30 " "	32 00	37 50	43 00	58 00	74 00	90 00
36 " "	35 00	40 00	46 00	64 00	82 00	100 00

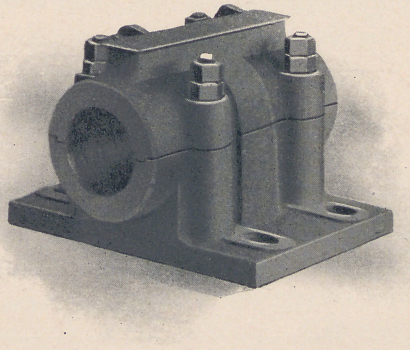
Discount per cent.

SPECIAL VACUUM OILING PILLOW BLOCK.

We experienced the same trouble as many paper mills with the ordinary Pillow Block when running shafting continuously night and day and developed this Special Box which is continually flooded with oil.

This box has been examined and approved by many of the best engineers in the country and is in operation on the last six or eight high speed machines we have built and gives perfect satisfaction and relief from troubles.

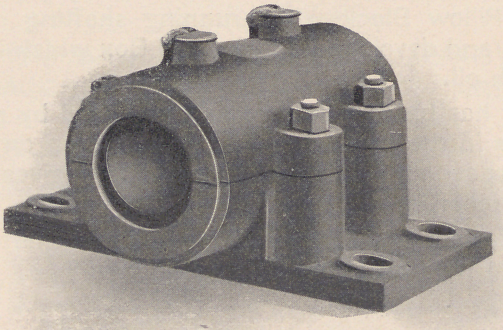
At each revolution of the shaft the box and shaft in the bearing are flooded with oil automatically.



Our Special Bearing.

Size of Shaft	Price	Size of Shaft	Price
$2\frac{7}{16}$	$11 00	$5\frac{3}{8}$	$ 75 00
$2\frac{15}{16}$	16 00	$5\frac{7}{8}$	90 00
$3\frac{7}{16}$	25 00	$6\frac{3}{8}$	112 00
$3\frac{15}{16}$	35 00	$6\frac{7}{8}$	145 00
$4\frac{7}{16}$	45 00	$7\frac{3}{8}$	180 00
$4\frac{7}{8}$	55 00	$7\frac{7}{8}$	210 00

RIGID AND BALL AND SOCKET PILLOW BLOCKS.



Standard Pillow Block.
Designed and Built by The Bagley and Sewall Company.

PRICE LIST STANDARD PILLOW BLOCKS.

Diameter of Shaft	Price	Diameter of Shaft	Price
$1\frac{15}{16}$	$ 6 50	$5\frac{3}{8}$	$ 63 00
$2\frac{7}{16}$	9 50	$5\frac{7}{8}$	78 00
$2\frac{15}{16}$	14 00	$6\frac{3}{8}$	99 00
$3\frac{3}{16}$	17 00	$6\frac{7}{8}$	130 00
$3\frac{7}{16}$	20 00	$7\frac{3}{8}$	160 00
$3\frac{15}{16}$	30 00	$7\frac{7}{8}$	190 00
$4\frac{7}{16}$	38 00		
$4\frac{7}{8}$	48 00		

PULLEYS.

SOLID, SPLIT HUB, CLAMP HUB, CONE PULLEYS, SOLID OR SPLIT.

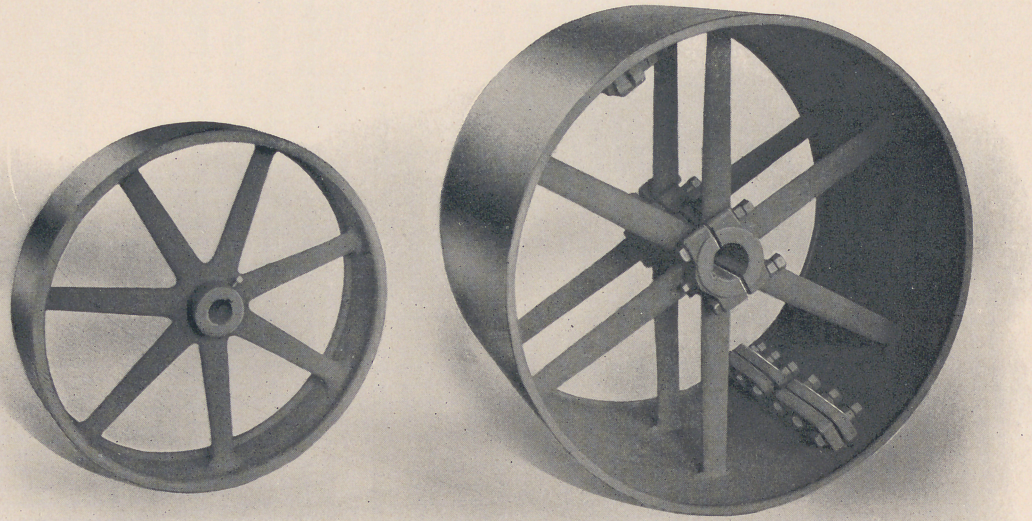
We make a specialty of figuring and furnising cone pulleys for line and floor driving for customers who operate paper machines.

The Bagley & Sewall Company's Pulleys are well known throughout the Paper Trade. The drop flange on each side of the rim of our pulleys has been noticed for years, and we have been flattered by having them specified by those who desire pulleys that do not break.

Our method of building pulleys developed from our desire to equip our paper machinery with pulleys that would not break or cause the purchaser any troubles. The photograph on next page shows the great strength of their construction. Our pulleys, we admit, have more iron in them than any pulleys sold in the United States, and further, are perfectly proportioned and designed, and are the strongest pulleys on the market. See cut next page.

All our pulleys above the smallest sizes have drop flanges from each side of the rim.

Special prices quoted on pulleys not included in the following list. Cone pulleys quoted separately.



Solid and Split Pulleys—Special Design.
The Bagley and Sewall Company,
Watertown, N. Y., U. S. A.

STANDARD PRICE LIST
SOLID AND SPLIT IRON PULLEYS.

Bored, Turned and Balanced, with Set Screws or Key Seats.

		SOLID		SPLIT				SOLID		SPLIT	
Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt	Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt
30	8	18 00	.....	23 40	.....	**33**	8	20 80	.....	27 55	.....
	9	19 80	.....	25 20	.....		9	22 85	.....	29 60	.....
	10	21 60	.....	27 00	.....		10	24 95	.....	31 70	.....
	11	23 50	.....	30 75	.....		11	27 10	.....	36 90	.....
	12	25 50	.....	32 75	.....		12	29 25	.....	39 05	.....
	14	29 70	.....	36 95	.....		14	34 10	.....	43 90	.....
	16	34 20	.....	44 20	.....		16	39 05	.....	52 05	.....
	18	38 70	.....	48 70	.....		18	44 10	.....	57 10	.....
	20	43 25	49 75	53 25	59 75		20	49 15	56 95	62 15	69 95
	22	.....	54 95	.....	68 95		22	.....	62 30	.....	81 30
	24	.....	60 25	.....	74 25		24	.....	67 90	.....	86 90
	26	.....	65 45	.....	79 45		26	.....	73 70	.....	92 70
	28	.....	70 70	.....	84 70		28	.....	79 60	.....	98 60
	30	.....	76 00	.....	90 00		30	.....	85 60	.....	104 60
							32	.....	91 75	.....	111 00
31	8	19 00	.....	25 75	.....	**34**					
	9	21 50	.....	28 25	.....		8	21 70	.....	28 45	.....
	10	22 70	.....	29 45	.....		9	23 85	.....	30 60	.....
	11	24 70	.....	34 50	.....		10	26 10	.....	32 85	.....
	12	26 75	.....	36 55	.....		11	28 30	.....	38 10	.....
	14	31 15	.....	40 95	.....		12	30 50	.....	40 30	.....
	16	35 80	.....	48 80	.....		14	35 60	.....	45 40	.....
	18	40 50	.....	53 50	.....		16	40 70	.....	53 70	.....
	20	45 35	52 15	58 35	65 15		18	45 90	.....	58 90	.....
	22	.....	57 40	.....	76 40		20	51 65	59 40	64 65	72 40
	24	.....	62 80	.....	81 80		22	.....	64 60	.....	83 60
	26	.....	68 20	.....	87 20		24	.....	70 50	.....	89 50
	28	.....	73 65	.....	92 65		26	.....	76 45	.....	95 45
	30	.....	79 20	.....	98 20		28	.....	82 55	.....	101 55
							30	.....	88 70	.....	107 70
32	8	19 85	.....	26 60	.....		32	.....	94 90	.....	115 00
	9	22 20	.....	28 95	.....						
	10	23 85	.....	30 60	.....	**35**	8	22 75	.....	29 50	.....
	11	25 90	.....	35 70	.....		9	24 90	.....	31 65	.....
	12	28 00	.....	37 80	.....		10	27 20	.....	33 95	.....
	14	32 65	.....	42 45	.....		11	29 50	.....	39 30	.....
	16	37 45	.....	50 45	.....		12	31 80	.....	41 60	.....
	18	42 30	.....	55 30	.....		14	37 05	.....	46 85	.....
	20	47 15	54 50	60 15	67 50		16	42 35	.....	55 35	.....
	22	.....	59 80	.....	78 80		18	47 70	.....	60 70	.....
	24	.....	65 35	.....	84 35		20	53 10	61 80	66 10	74 80
	26	.....	70 90	.....	89 90		22	.....	66 95	.....	85 95
	28	.....	76 75	.....	95 75		24	.....	73 20	.....	92 20
	30	.....	82 40	.....	101 40		26	.....	79 60	.....	98 60
	32	.....	88 15	.....	108 00		28	.....	86 10	.....	105 10

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

SOLID				SPLIT		SOLID				SPLIT	
Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt	Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt
35	30	.....	92 70	.....	111 70	40	24	75 90	87 30	102 90	114 30
	32	.....	99 40	.....	120 00		26	.....	94 55	.....	121 55
36	8	23 10	.....	29 85	.....		28	.....	101 90	.....	128 90
	9	26 00	.....	32 75	.....		30	.....	109 10	.....	136 10
	10	28 30	.....	35 05	.....		32	.....	116 60	.....	153 60
	11	30 70	.....	40 50	.....		34	.....	124 00	.....	161 00
	12	33 10	.....	42 90	.....		36	.....	131 35	.....	168 35
	14	38 55	.....	48 35	.....		38	.....	133 80	.....	175 80
	16	44 05	.....	57 05	.....		40	.....	146 20	.....	183 20
	18	49 55	.....	62 55	.....	42	8	30 30	.....	40 20	.....
	20	55 05	64 30	63 05	77 30		9	33 05	.....	42 95	.....
	22	61 55	69 45	80 55	88 45		10	35 85	.....	45 75	.....
	24	67 05	75 70	86 05	94 70		11	38 75	.....	52 25	.....
	26	.....	82 00	.....	101 00		12	41 60	.....	55 10	.....
	28	.....	83 45	.....	107 45		14	47 95	.....	61 45	.....
	30	.....	94 95	.....	113 95		16	54 40	.....	72 40	.....
	32	.....	101 55	.....	120 55		18	61 00	.....	79 00	.....
	34	.....	108 25	.....	127 25		20	67 60	77 75	85 60	95 75
	36	.....	115 00	.....	134 00		22	74 30	85 45	101 30	112 45
38	8	25 90	.....	35 80	.....		24	81 00	93 15	108 00	120 15
	9	28 35	.....	38 25	.....		26	.....	100 85	.....	127 85
	10	30 80	.....	40 70	.....		28	.....	108 60	.....	135 60
	11	33 35	.....	46 85	.....		30	.....	116 40	.....	143 40
	12	35 95	.....	49 45	.....		32	.....	124 20	.....	161 20
	14	41 65	.....	55 15	.....		34	.....	132 00	.....	169 00
	16	47 65	.....	65 65	.....		36	.....	139 80	.....	176 80
	18	53 70	.....	71 70	.....		38	.....	147 60	.....	184 60
	20	59 80	68 75	77 80	86 75		40	.....	155 40	.....	192 40
	22	65 90	74 80	92 90	101 80	44	8	32 70	.....	42 60	.....
	24	72 00	81 45	99 00	108 45		9	35 65	.....	45 55	.....
	26	.....	88 25	.....	115 25		10	38 65	.....	48 55	.....
	28	.....	95 15	.....	122 15		11	41 80	.....	55 30	.....
	30	.....	102 05	.....	129 05		12	44 90	.....	58 40	.....
	32	.....	109 00	.....	146 00		14	51 60	.....	65 10	.....
	34	.....	115 95	.....	152 95		16	58 50	.....	76 50	.....
	36	.....	123 00	.....	160 00		18	65 50	.....	83 50	.....
40	8	28 10	.....	38 00	.....		20	72 50	83 45	90 50	101 45
	9	30 70	.....	40 60	.....		22	79 50	91 40	106 50	118 40
	10	33 30	.....	43 20	.....		24	86 65	99 65	113 65	126 65
	11	36 05	.....	49 55	.....		26	.....	107 85	.....	134 85
	12	38 75	.....	52 25	.....		28	.....	115 10	.....	142 10
	14	44 80	.....	58 30	.....		30	.....	124 45	.....	151 45
	16	50 90	.....	68 90	.....		32	.....	132 80	.....	169 80
	18	57 50	.....	75 50	.....		34	.....	141 10	.....	178 10
	20	63 70	73 25	81 70	91 25		36	.....	149 40	.....	186 40
	22	69 70	80 15	96 70	107 15		38	.....	157 80	.....	194 80
							40	.....	166 15	.....	203 15

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

Diam.	Face	SOLID Double Belt	SOLID Double Arm, Double Belt	SPLIT Double Belt	SPLIT Double Arm, Double Belt
46	8	35 15	.....	45 05	.....
	9	38 35	.....	48 25	.....
	10	41 55	.....	51 45	.....
	11	44 90	.....	58 40	.....
	12	48 20	.....	61 70	.....
	14	55 30	.....	68 80	.....
	16	62 60	.....	80 60	.....
	18	70 00	.....	88 00	.....
	20	77 40	89 00	95 40	107 00
	22	84 40	97 50	111 40	124 50
	24	92 30	106 15	119 30	133 15
	26	.....	114 90	.....	141 90
	28	.....	123 70	.....	150 70
	30	.....	132 50	.....	159 50
	32	.....	141 45	.....	178 45
	34	.....	150 30	.....	187 30
	36	.....	159 15	.....	196 15
	38	.....	168 10	.....	205 10
	40	.....	177 00	.....	214 00
48	8	37 65	.....	50 65	.....
	9	41 05	.....	54 05	.....
	10	44 45	.....	57 45	.....
	11	48 00	.....	66 00	.....
	12	51 50	.....	69 50	.....
	14	59 00	.....	77 00	.....
	16	66 70	.....	91 70	.....
	18	74 50	.....	99 50	.....
	20	82 30	94 65	107 30	119 65
	22	90 10	103 60	124 60	138 10
	24	98 00	112 70	132 50	147 20
	26	.....	121 90	.....	156 40
	28	.....	131 25	.....	165 75
	30	.....	140 65	.....	175 15
	32	.....	150 05	.....	198 05
	34	.....	159 50	.....	207 50
	36	.....	168 95	.....	216 95
	38	.....	178 35	.....	226 35
	40	.....	187 80	.....	235 80
50	6	33 30	.....	43 30	.....
	7	36 80	.....	49 80	.....
	8	40 30	.....	53 30	.....
	9	43 85	.....	56 85	.....
	10	47 45	.....	60 45	.....
	11	51 15	.....	69 15	.....
	12	54 80	.....	72 80	.....
	14	62 70	.....	80 70	.....
	16	70 85	.....	95 85	.....
50	18	79 15	.....	104 15	.....
	20	87 40	100 50	112 40	125 50
	22	95 70	110 50	130 20	145 00
	24	104 10	119 90	138 60	154 40
	26	.....	129 50	.....	164 00
	28	.....	139 45	.....	173 95
	30	.....	149 40	.....	183 90
	32	.....	159 35	.....	207 35
	34	.....	169 50	.....	217 50
	36	.....	179 50	.....	227 50
	38	.....	189 65	.....	237 65
	40	.....	199 85	.....	247 85
	42	.....	210 05	.....	273 05
	44	.....	220 25	.....	283 25
52	6	35 65	.....	45 65	.....
	7	39 30	.....	52 30	.....
	8	43 00	.....	56 00	.....
	9	46 75	.....	59 75	.....
	10	50 50	.....	63 50	.....
	11	54 35	.....	72 35	.....
	12	58 15	.....	76 15	.....
	14	66 45	.....	84 45	.....
	16	75 05	.....	100 05	.....
	18	83 80	.....	108 80	.....
	20	92 50	106 40	117 50	131 40
	22	101 30	116 50	135 80	151 00
	24	110 30	126 85	144 80	161 35
	26	119 30	137 20	153 80	171 70
	28	.....	147 65	.....	182 15
	30	.....	158 20	.....	192 70
	32	.....	168 80	.....	216 80
	34	.....	179 50	.....	227 50
	36	.....	190 10	.....	238 10
	38	.....	200 90	.....	248 90
	40	.....	211 70	.....	259 70
	42	.....	222 50	.....	285 50
	44	.....	233 30	.....	296 30
54	6	37 90	.....	47 90	.....
	7	41 80	.....	54 80	.....
	8	45 70	.....	53 70	.....
	9	49 65	.....	62 65	.....
	10	53 60	.....	66 60	.....
	11	57 55	.....	75 55	.....
	12	61 50	.....	79 50	.....
	14	70 25	.....	88 25	.....
	16	79 25	.....	104 25	.....
	18	83 50	.....	113 50	.....

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

		SOLID		SPLIT				SOLID		SPLIT	
Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt	Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt
54	20	97 70	112 35	122 70	137 35	58	22	119 25	137 15	153 75	171 65
	22	107 00	123 05	141 50	157 55		24	129 80	149 25	164 30	183 75
	24	116 50	133 95	151 00	168 45		26	140 40	161 45	174 90	195 95
	26	126 00	144 90	160 50	179 40		28	.....	173 55	.....	208 05
	28	.....	155 95	.....	190 45		30	.....	185 95	.....	220 45
	30	.....	167 10	.....	201 60		32	.....	198 25	.....	246 25
	32	.....	178 25	.....	226 25		34	.....	210 35	.....	258 35
	34	.....	189 40	.....	237 40		36	.....	222 50	.....	270 50
	36	.....	200 65	.....	248 65		38	.....	234 95	.....	282 95
	38	.....	211 95	.....	259 95		40	.....	247 25	.....	295 25
	40	.....	224 35	.....	272 35		42	.....	259 60	.....	322 60
	42	.....	237 50	.....	300 50		44	.....	272 10	.....	335 10
	44	.....	250 65	.....	313 65						
						60	6	46 00	.....	56 00	.....
56	6	40 65	.....	50 65	.....		7	50 00	.....	63 00	.....
	7	44 50	.....	57 50	.....		8	54 10	.....	67 10	.....
	8	48 50	.....	61 50	.....		9	58 35	.....	71 35	.....
	9	52 55	.....	65 55	.....		10	62 75	.....	75 75	.....
	10	56 60	.....	69 60	.....		11	67 30	.....	85 30	.....
	11	60 75	.....	78 75	.....		12	72 00	.....	90 00	.....
	12	65 00	.....	83 00	.....		14	82 55	.....	100 55	.....
	14	74 35	.....	92 35	.....		16	92 55	.....	117 55	.....
	16	83 70	.....	108 70	.....		18	103 50	.....	123 50	.....
	18	93 50	.....	118 50	.....		20	114 45	131 60	139 45	156 60
	20	103 25	119 75	128 25	144 75		22	125 45	144 25	159 95	178 75
	22	113 10	130 05	147 60	164 55		24	136 50	157 00	171 00	191 50
	24	123 15	141 60	157 65	176 10		26	147 65	169 80	182 15	204 30
	26	133 20	153 20	167 70	187 70		28	.....	182 60	.....	217 10
	28	.....	164 70	.....	199 20		30	.....	195 40	.....	229 90
	30	.....	176 50	.....	211 00		32	.....	208 20	.....	256 20
	32	.....	188 25	.....	236 25		34	.....	221 00	.....	269 00
	34	.....	200 00	.....	248 00		36	.....	233 80	.....	281 80
	36	.....	212 00	.....	260 00		38	.....	246 60	.....	294 60
	38	.....	224 00	.....	272 00		40	.....	259 40	.....	307 40
	40	.....	236 00	.....	284 00		42	.....	272 25	.....	335 25
	42	.....	248 50	.....	311 50		44	.....	285 25	.....	348 25
	44	.....	261 00	.....	324 00		46	.....	298 35	.....	361 35
							48	.....	311 45	.....	374 45
58	6	43 25	.....	53 25	.....		50	.....	324 55	.....	387 35
	7	47 20	.....	60 20	.....						
	8	51 30	.....	64 30	.....	62	6	48 30	.....	68 30	.....
	9	55 45	.....	68 45	.....		7	52 65	.....	72 65	.....
	10	59 65	.....	72 65	.....		8	57 10	.....	77 10	.....
	11	64 00	.....	82 00	.....		9	61 65	.....	81 65	.....
	12	68 50	.....	86 50	.....		10	66 30	.....	86 30	.....
	14	78 45	.....	96 45	.....		11	71 10	.....	97 10	.....
	16	88 35	.....	113 35	.....		12	76 00	.....	102 00	.....
	18	98 50	.....	123 50	.....		14	86 60	.....	112 60	.....
	20	108 85	125 20	133 85	150 20		16	97 25	.....	132 25	.....

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

		SOLID		SPLIT	
Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt
62	18	108 70	.....	143 70	.....
	20	120 35	138 40	155 35	173 40
	22	131 85	150 60	179 85	198 60
	24	143 35	164 00	191 35	212 00
	26	155 15	177 80	203 15	225 80
	28	.....	191 60	.....	239 60
	30	.....	205 40	.....	253 40
	32	.....	219 20	.....	283 20
	34	.....	233 00	.....	297 10
	36	.....	246 80	.....	310 80
	38	.....	260 60	.....	324 60
	40	.....	273 40	.....	337 40
	42	.....	287 20	.....	369 20
	44	.....	301 00	.....	383 00
	46	.....	314 80	.....	396 80
	48	.....	328 60	.....	410 60
	50	.....	342 40	.....	424 40
64	6	50 60	.....	70 60	.....
	7	55 35	.....	75 35	.....
	8	60 10	.....	80 10	.....
	9	64 95	.....	84 95	.....
	10	69 90	.....	89 90	.....
	11	74 90	.....	100 90	.....
	12	80 00	.....	106 00	.....
	14	91 35	.....	117 35	.....
	16	102 35	.....	137 35	.....
	18	113 85	.....	148 85	.....
	20	126 25	145 20	161 25	189 20
	22	138 30	159 05	186 30	207 05
	24	150 90	173 55	198 90	221 55
	26	162 65	187 05	210 65	235 05
	28	.....	201 15	.....	249 15
	30	.....	215 20	.....	263 20
	32	.....	228 25	.....	292 25
	34	.....	243 25	.....	307 25
	36	.....	257 35	.....	321 35
	38	.....	271 30	.....	335 30
	40	.....	285 30	.....	349 30
	42	.....	299 25	.....	381 25
	44	.....	313 20	.....	395 20
	46	.....	327 15	.....	409 15
	48	.....	341 10	.....	423 10
	50	.....	355 05	.....	437 05
66	6	53 00	.....	73 00	.....
	7	58 05	.....	78 05	.....
	8	63 15	.....	83 15	.....
	9	68 30	.....	88 30	.....

		SOLID		SPLIT	
Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt
66	10	73 50	.....	93 50	.....
	11	78 75	.....	104 75	.....
	12	84 00	.....	110 00	.....
	14	95 75	.....	121 75	.....
	16	107 55	.....	142 55	.....
	18	119 50	.....	154 50	.....
	20	132 15	152 05	167 15	187 05
	22	144 80	166 50	192 80	214 50
	24	157 50	181 10	205 50	229 10
	26	170 20	195 70	218 20	243 70
	28	182 95	210 40	230 95	258 40
	30	195 70	225 05	243 70	273 05
	32	.....	239 80	.....	303 80
	34	.....	254 50	.....	318 50
	36	.....	269 20	.....	333 20
	38	.....	283 95	.....	347 95
	40	.....	298 65	.....	362 65
	42	.....	313 35	.....	395 35
	44	.....	328 05	.....	410 05
	46	.....	342 75	.....	424 75
	48	.....	357 45	.....	439 45
	50	.....	372 15	.....	454 15
68	6	55 70	.....	75 70	.....
	7	60 95	.....	80 95	.....
	8	66 25	.....	86 25	.....
	9	71 60	.....	92 60	.....
	10	77 10	.....	97 10	.....
	11	82 55	.....	108 55	.....
	12	88 20	.....	114 20	.....
	14	100 25	.....	126 25	.....
	16	112 55	.....	147 55	.....
	18	125 10	.....	160 10	.....
	20	138 35	159 10	173 35	194 10
	22	151 50	174 25	199 50	222 25
	24	164 90	189 75	212 90	237 75
	26	178 05	204 75	226 05	252 75
	28	191 35	220 05	239 35	268 05
	30	204 60	235 30	252 60	283 30
	32	.....	250 70	.....	314 70
	34	.....	266 00	.....	330 00
	36	.....	281 30	.....	345 30
	38	.....	296 70	.....	360 70
	40	.....	312 00	.....	376 00
	42	.....	327 30	.....	409 30
	44	.....	342 60	.....	424 60
	46	.....	357 90	.....	439 90
	48	.....	373 20	.....	455 20
	50	.....	388 50	.....	470 50

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

	SOLID			SPLIT			SOLID				SPLIT	
Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt	Diam.	Face	Double Belt	Double Arm, Double Belt		Double Belt	Double Arm, Double Belt
70	6	58 40	.....	78 40	.....	72	44	.....	371 90		.....	453 90
	7	63 85	.....	83 85	.....		46	.....	388 45		.....	470 45
	8	69 25	.....	89 25	.....		48	.....	405 00		.....	487 00
	9	75 00	.....	95 00	.....		50	.....	421 55		.....	503 55
	10	80 70	.....	100 70	.....							
	11	86 40	.....	112 40	.....	74	8	75 75	.....		95 75	.....
	12	92 40	.....	118 40	.....		9	81 90	.....		101 90	.....
	14	104 85	.....	130 85	.....		10	85 50	.....		105 50	.....
	16	117 65	.....	152 65	.....		11	94 80	.....		120 80	.....
	18	130 80	.....	165 80	.....		12	101 00	.....		127 00	.....
	20	144 55	166 25	179 55	201 25		14	114 45	.....		140 45	.....
	22	158 25	182 00	206 25	230 00		16	128 25	.....		163 25	.....
	24	172 50	198 00	220 50	246 00		18	142 50	.....		177 50	.....
	26	185 95	213 85	233 95	261 85		20	157 10	180 65		192 10	215 65
	28	199 75	229 70	247 75	277 70		22	172 00	197 80		220 00	245 80
	30	213 60	245 65	261 60	293 65		24	187 00	215 05		235 00	263 05
	32	.....	261 60	.....	325 60		26	201 85	232 10		249 85	280 10
	34	.....	277 50	.....	341 50		28	216 75	249 25		264 75	297 25
	36	.....	293 40	.....	357 40		30	231 70	266 45		279 70	314 45
	38	.....	309 05	.....	373 05		32	.....	283 60		.....	347 60
	40	.....	325 35	.....	389 35		34	.....	300 85		.....	364 85
	42	.....	341 25	.....	423 25		36	.....	317 95		.....	331 95
	44	.....	357 15	.....	439 15		38	.....	335 10		.....	399 10
	46	.....	373 05	.....	455 05		40	.....	352 30		.....	416 30
	48	.....	388 95	.....	470 95		42	.....	369 50		.....	451 50
	50	.....	404 85	.....	486 85		44	.....	386 70		.....	463 70
							46	.....	403 90		.....	485 90
72	6	61 00	.....	81 00	.....		48	.....	421 10		.....	503 10
	7	66 75	.....	86 75	.....		50	.....	438 30		.....	520 30
	8	72 55	.....	92 55	.....							
	9	78 40	.....	98 40	.....	76	8	79 05	.....		99 05	.....
	10	84 30	.....	104 30	.....		9	85 50	.....		105 50	.....
	11	90 30	.....	116 30	.....		10	92 70	.....		112 70	.....
	12	96 50	.....	122 50	.....		11	99 30	.....		125 30	.....
	14	109 45	.....	135 45	.....		12	105 50	.....		131 50	.....
	16	122 75	.....	157 75	.....		14	119 45	.....		145 45	.....
	18	136 50	.....	171 50	.....		16	133 75	.....		168 75	.....
	20	150 60	173 20	185 60	208 20		18	148 45	.....		183 45	.....
	22	165 00	189 75	213 00	237 75		20	163 70	183 25		198 70	223 25
	24	179 50	207 40	227 50	255 40		22	179 00	205 85		227 00	253 85
	26	193 85	222 90	241 85	270 90		24	194 50	223 70		242 50	271 70
	28	208 20	239 45	256 20	287 45		26	209 85	241 30		257 85	289 30
	30	222 60	256 00	270 60	304 00		28	225 35	259 15		273 35	307 15
	32	.....	272 55	.....	336 55		30	240 80	276 90		288 80	324 90
	34	.....	239 10	.....	353 10		32	.....	294 75		.....	358 75
	36	.....	305 65	.....	369 65		34	.....	312 55		.....	376 55
	38	.....	322 25	.....	386 25		36	.....	330 30		.....	394 30
	40	.....	338 80	.....	402 80		38	.....	348 00		.....	412 00
	42	.....	355 35	.....	437 35		40	.....	366 00		.....	430 00

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

SOLID				SPLIT		SOLID				SPLIT	
Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt	Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt
76	42	.....	384 00	.....	466 00	80	40	.....	393 55	.....	457 55
	44	.....	402 00	.....	484 00		42	.....	412 65	.....	494 65
	46	.....	420 00	.....	502 00		44	.....	431 65	.....	513 65
	48	.....	438 00	.....	520 00		46	.....	450 75	.....	532 75
	50	.....	456 05	.....	538 05		48	.....	469 85	.....	551 85
							50	.....	489 00	.....	571 00
78	8	82 35	.....	102 35	.....						
	9	89 10	.....	109 10	.....	82	8	89 55	.....	109 55	.....
	10	95 90	.....	115 90	.....		9	96 70	.....	116 70	.....
	11	102 85	.....	128 85	.....		10	103 85	.....	123 85	.....
	12	110 00	.....	136 00	.....		11	111 15	.....	137 15	.....
	14	124 50	.....	150 50	.....		12	118 65	.....	144 65	.....
	16	139 25	.....	174 25	.....		14	134 50	.....	160 50	.....
	18	154 50	.....	189 50	.....		16	150 65	.....	185 65	.....
	20	170 30	195 85	205 30	230 85		18	158 85	.....	193 85	.....
	22	186 10	214 00	234 10	262 00		20	183 90	211 50	218 90	246 50
	24	202 00	232 30	250 00	280 30		22	200 70	230 80	248 70	278 80
	26	217 95	250 65	265 95	298 65		24	218 00	250 70	266 00	298 70
	28	233 95	269 05	281 95	317 05		26	234 65	269 85	282 65	317 85
	30	249 95	287 45	297 95	335 45		28	251 75	289 50	299 75	337 50
	32	.....	305 90	.....	369 90		30	268 80	309 10	316 80	357 10
	34	.....	324 30	.....	388 30		32	.....	328 90	.....	392 90
	36	.....	342 70	.....	406 70		34	.....	348 55	.....	412 55
	38	.....	361 10	.....	425 10		36	.....	368 20	.....	432 20
	40	.....	379 50	.....	443 50		38	.....	388 00	.....	452 00
	42	.....	397 90	.....	479 90		40	.....	407 65	.....	471 65
	44	.....	416 30	.....	498 30		42	.....	427 30	.....	509 30
	46	.....	434 75	.....	516 75		44	.....	446 95	.....	528 95
	48	.....	453 20	.....	535 20		46	.....	466 60	.....	548 60
	50	.....	471 65	.....	553 65		48	.....	486 25	.....	568 25
							50	.....	505 90	.....	587 90
80	8	85 95	.....	105 95	.....						
	9	92 95	.....	112 95	.....	84	8	93 25	.....	113 25	.....
	10	99 85	.....	119 85	.....		9	100 50	.....	120 50	.....
	11	106 95	.....	132 95	.....		10	107 85	.....	127 85	.....
	12	114 30	.....	140 30	.....		11	115 35	.....	141 35	.....
	14	129 50	.....	155 50	.....		12	123 00	.....	149 00	.....
	16	144 95	.....	179 95	.....		14	139 60	.....	165 60	.....
	18	160 80	.....	195 80	.....		16	156 40	.....	191 40	.....
	20	177 10	203 65	212 10	238 65		18	173 50	.....	208 50	.....
	22	193 40	222 40	241 40	270 40		20	190 75	219 35	225 75	254 35
	24	210 00	241 50	258 00	289 50		22	208 10	239 30	256 10	287 30
	26	226 25	260 20	274 25	308 20		24	225 50	259 30	273 50	307 30
	28	242 85	279 30	290 85	327 30		26	243 05	279 50	291 05	327 50
	30	259 35	298 25	307 35	346 25		28	260 65	299 75	308 65	347 75
	32	.....	317 40	.....	381 40		30	278 30	320 05	326 30	368 05
	34	.....	336 35	.....	400 35		32	.....	340 40	.....	404 40
	36	.....	355 45	.....	419 45		34	.....	360 75	.....	424 75
	38	.....	374 55	.....	438 55		36	.....	381 10	.....	445 10

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

		SOLID		SPLIT	
Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt
84	38	.....	402 65	.....	466 65
	40	.....	423 60	.....	487 60
	42	.....	444 55	.....	526 55
	44	.....	465 50	.....	547 50
	46	.....	486 45	.....	568 45
	48	.....	507 40	.....	589 40
	50	.....	528 40	.....	610 40
86	8	97 10	.....	135 10	.....
	9	104 60	.....	142 60	.....
	10	112 25	.....	150 25	.....
	11	120 05	.....	158 05	.....
	14	144 35	.....	182 35	.....
	16	162 05	.....	215 55	.....
	18	179 50	.....	233 00	.....
	20	197 40	227 00	250 90	280 50
	22	215 40	247 75	285 40	317 75
	24	233 50	268 55	303 50	338 55
	26	251 70	289 45	321 70	359 45
	28	269 90	310 40	339 90	380 40
	30	288 20	331 40	358 20	401 40
	32	.....	352 50	.....	442 50
	34	.....	373 50	.....	463 50
	36	.....	394 50	.....	484 50
	38	.....	416 40	.....	506 40
	40	.....	437 85	.....	527 85
	42	.....	459 25	.....	574 25
	44	.....	480 65	.....	595 65
	46	.....	502 15	.....	617 15
	48	.....	523 45	.....	638 45
	50	.....	545 05	.....	660 05
88	8	109 90	.....	138 90	.....
	9	108 70	.....	146 70	.....
	10	116 65	.....	154 65	.....
	11	124 75	.....	162 75	.....
	12	133 00	.....	171 00	.....
	14	149 70	.....	187 70	.....
	16	167 70	.....	221 20	.....
	18	185 50	.....	239 00	.....
	20	204 05	234 65	257 55	288 15
	22	222 70	256 15	292 70	326 15
	24	241 50	277 75	311 50	347 75
	26	260 30	299 40	330 30	369 40
	28	279 20	321 05	349 20	391 05
	30	298 10	342 80	368 10	412 80
	32	.....	364 60	.....	454 60
	34	.....	386 30	.....	476 30
	36	.....	408 00	.....	498 00

		SOLID		SPLIT	
Diam.	Face	Double Belt	Double Arm, Double Belt	Double Belt	Double Arm, Double Belt
88	38	.....	430 15	.....	520 15
	40	.....	452 10	.....	542 10
	42	.....	474 00	.....	589 00
	44	.....	495 90	.....	610 90
	46	.....	517 85	.....	632 85
	48	.....	539 68	.....	676 68
	50	.....	561 70	.....	698 70
90	8	104 75	.....	142 75	.....
	9	112 80	.....	150 80	.....
	10	121 00	.....	159 00	.....
	11	129 40	.....	167 40	.....
	12	138 00	.....	176 00	.....
	14	155 60	.....	193 60	.....
	16	173 40	.....	226 90	.....
	18	191 50	.....	245 00	.....
	20	210 70	242 30	264 20	295 80
	22	230 05	264 55	300 05	334 55
	24	249 50	286 95	319 50	356 95
	26	268 95	309 30	338 95	379 30
	28	288 45	331 70	358 45	401 70
	30	307 95	354 15	377 95	424 15
	32	327 50	376 65	417 50	466 65
	34	347 00	399 05	437 00	489 05
	36	.....	421 50	.....	511 50
	38	.....	443 90	.....	533 90
	40	.....	466 30	.....	556 30
	42	.....	488 70	.....	603 70
	44	.....	511 10	.....	626 10
	46	.....	533 50	.....	648 50
	48	.....	555 90	.....	670 90
	50	.....	578 30	.....	693 30
92	8	108 90	.....	146 90	.....
	9	117 15	.....	155 15	.....
	10	125 60	.....	163 60	.....
	11	134 25	.....	172 25	.....
	12	143 00	.....	181 00	.....
	14	161 10	.....	199 10	.....
	16	179 50	.....	233 00	.....
	18	198 50	.....	252 00	.....
	20	218 15	250 85	271 65	304 35
	22	238 20	273 95	308 20	343 95
	24	258 35	297 10	328 35	367 10
	26	278 30	320 05	348 30	390 05
	28	298 30	343 00	368 30	413 00
	30	318 50	366 25	388 50	436 25
	32	338 65	389 80	428 65	479 80
	34	358 75	412 60	448 75	502 60

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

Diam.	Face	SOLID Double Belt	SOLID Double Arm, Double Belt	SPLIT Double Belt	SPLIT Double Arm, Double Belt
92	36	.....	435 70	.....	525 70
	38	.....	458 85	.....	548 85
	40	.....	481 95	.....	571 95
	42	.....	505 10	.....	620 10
	44	.....	528 30	.....	643 30
	46	.....	551 55	.....	666 55
	48	.....	574 80	.....	689 80
	50	.....	598 10	.....	713 10
94	8	113 00	.....	151 00	.....
	9	121 50	.....	159 50	.....
	10	130 20	.....	168 20	.....
	11	139 05	.....	177 05	.....
	12	148 00	.....	186 00	.....
	14	166 60	.....	204 60	.....
	16	185 65	.....	239 15	.....
	18	205 50	.....	259 00	.....
	20	225 60	259 40	279 10	312 90
	22	246 35	283 35	316 35	353 35
	24	267 20	307 25	337 20	377 25
	26	287 65	330 80	357 65	400 80
	28	308 15	354 35	378 15	424 35
	30	329 00	378 35	399 00	448 35
	32	339 40	390 40	429 40	480 40
	34	349 85	402 45	439 85	492 45
	36	.....	449 95	.....	539 95
	38	.....	473 75	.....	563 75
	40	.....	497 55	.....	587 55
	42	.....	521 35	.....	636 35
	44	.....	545 15	.....	660 15
	46	.....	568 95	.....	683 95
	48	.....	592 80	.....	707 80
	50	.....	616 70	.....	731 70
96	8	117 10	.....	155 10	.....
	9	125 85	.....	163 85	.....
	10	134 75	.....	172 75	.....
	11	143 85	.....	181 85	.....
	12	153 00	.....	191 00	.....
	14	172 10	.....	210 10	.....
	16	191 75	.....	245 25	.....
	18	212 50	.....	266 00	.....
	20	233 00	267 95	286 50	321 45
	22	254 40	292 70	324 40	362 70
	24	276 00	317 40	346 00	387 40
	26	297 00	341 55	367 00	411 55
	28	318 00	365 70	388 00	435 70
	30	339 50	390 45	409 50	460 45
	32	361 00	415 25	451 00	505 25

Diam.	Face	SOLID Double Belt	SOLID Double Arm, Double Belt	SPLIT Double Belt	SPLIT Double Arm, Double Belt
96	34	382 30	439 65	472 30	529 65
	36	.....	464 15	.....	554 15
	38	.....	488 65	.....	578 65
	40	.....	513 15	.....	603 15
	42	.....	537 70	.....	652 70
	44	.....	562 30	.....	677 30
	46	.....	586 95	.....	701 95
	48	.....	611 65	.....	726 65
	50	.....	636 40	.....	751 40
	52	.....	661 20	.....	811 20
	54	.....	686 05	.....	836 05
	56	.....	716 95	.....	866 95
	58	.....	735 90	.....	885 90
	60	.....	760 90	.....	910 90
98	8	121 65	.....	159 65	.....
	9	130 80	.....	168 80	.....
	10	140 10	.....	178 10	.....
	11	149 50	.....	187 50	.....
	12	159 00	.....	197 00	.....
	14	178 75	.....	216 75	.....
	16	198 95	.....	252 45	.....
	18	219 50	.....	273 00	.....
	20	240 75	280 20	294 25	333 70
	22	262 70	305 45	332 70	375 45
	24	284 65	327 35	354 65	397 35
	26	306 35	352 25	376 35	422 25
	28	328 00	377 20	398 00	447 20
	30	350 00	402 15	420 00	472 15
	32	372 00	427 80	462 00	517 80
	34	393 00	452 95	483 00	542 95
	36	.....	478 20	.....	568 20
	38	.....	503 35	.....	593 35
	40	.....	528 45	.....	618 45
	42	.....	553 70	.....	678 70
	44	.....	579 00	.....	694 00
	46	.....	604 35	.....	719 35
	48	.....	629 75	.....	744 75
	50	.....	655 20	.....	770 20
	52	.....	680 70	.....	830 70
	54	.....	706 25	.....	856 25
	56	.....	731 85	.....	881 85
	58	.....	757 50	.....	907 50
	60	.....	783 20	.....	933 20

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

Diam.	Face	SOLID Double Belt	SOLID Double Arm, Double Belt	SPLIT Double Belt	SPLIT Double Arm, Double Belt
100	8	126 20	.....	164 20	.....
	9	135 75	.....	173 75	.....
	10	145 45	.....	183 45	.....
	11	155 20	.....	193 20	.....
	12	165 00	.....	203 00	.....
	14	185 40	.....	223 40	.....
	16	206 20	.....	259 70	.....
	18	226 50	.....	280 00	.....
	20	248 50	287 45	302 00	340 95
	22	270 90	313 20	340 90	383 20
	24	293 95	338 35	363 95	408 35
	26	315 65	364 00	385 65	434 00
	28	338 00	389 20	408 00	459 20
	30	360 50	414 35	430 50	484 35
	32	383 00	440 45	473 00	530 45
	34	404 50	466 30	494 50	556 30
	36	.....	492 25	.....	582 25
	38	.....	518 10	.....	608 10
	40	.....	543 90	.....	633 90
	42	.....	569 85	.....	684 85
	44	.....	595 85	.....	710 85
	46	.....	621 90	.....	736 90
	48	.....	648 00	.....	763 00
	50	.....	674 15	.....	789 15
	52	.....	700 35	.....	850 35
	54	.....	726 60	.....	876 60
	56	.....	752 90	.....	902 90
	58	.....	779 25	.....	929 25
	60	.....	805 65	.....	955 65
102	8	130 75	.....	168 75	.....
	9	140 70	.....	178 70	.....
	10	150 75	.....	188 75	.....
	11	160 85	.....	198 85	.....
	12	171 00	.....	209 00	.....
	14	192 00	.....	230 00	.....
	16	213 40	.....	266 90	.....
	18	234 50	.....	288 00	.....
	20	256 25	294 70	309 75	348 20
	22	279 05	320 90	349 05	390 90
	24	302 00	347 30	372 00	417 30
	26	324 95	373 70	394 95	443 70
	28	347 95	400 15	417 95	470 15
	30	370 95	426 60	440 95	496 60
	32	394 00	453 10	484 00	543 10
	34	417 10	479 65	507 10	569 65
	36	.....	506 25	.....	596 25
	38	.....	532 80	.....	622 80
	40	.....	559 35	.....	649 35

Diam.	Face	SOLID Double Belt	SOLID Double Arm, Double Belt	SPLIT Double Belt	SPLIT Double Arm, Double Belt
102	42	.....	585 95	.....	700 95
	44	.....	612 50	.....	727 50
	46	.....	639 20	.....	754 20
	48	.....	665 95	.....	780 95
	50	.....	691 75	.....	806 75
	52	.....	718 60	.....	868 60
	54	.....	745 50	.....	895 50
	56	.....	772 45	.....	922 45
	58	.....	799 45	.....	949 45
	60	.....	826 50	.....	976 50
104	8	135 25	.....	173 25	.....
	9	145 35	.....	183 35	.....
	10	155 60	.....	193 60	.....
	11	165 90	.....	203 90	.....
	12	176 30	.....	214 30	.....
	14	197 80	.....	235 80	.....
	16	219 75	.....	273 25	.....
	18	241 65	.....	295 15	.....
	20	264 20	303 85	317 70	357 35
	22	287 55	330 70	357 55	400 70
	24	311 00	357 65	381 00	427 65
	26	334 40	384 55	404 40	454 55
	28	357 90	411 55	427 90	481 55
	30	381 40	438 60	451 40	508 60
	32	405 00	465 75	495 00	555 75
	34	428 60	492 85	518 60	582 85
	36	.....	520 05	.....	610 05
	38	.....	547 15	.....	637 15
	40	.....	574 30	.....	664 30
	42	.....	601 45	.....	716 45
	44	.....	628 60	.....	743 60
	46	.....	655 90	.....	770 90
	48	.....	683 25	.....	798 25
	50	.....	709 95	.....	824 95
	52	.....	737 05	.....	837 05
	54	.....	764 55	.....	914 55
	56	.....	792 10	.....	942 10
	58	.....	819 65	.....	969 65
	60	.....	847 30	.....	997 30
106	8	139 80	.....	177 80	.....
	9	150 05	.....	188 05	.....
	10	160 50	.....	198 50	.....
	11	171 00	.....	209 00	.....
	12	181 65	.....	219 65	.....
	14	203 65	.....	241 65	.....
	16	226 10	.....	279 60	.....
	18	248 85	.....	302 35	.....

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

Diam.	Face	SOLID Double Belt	SOLID Double Arm, Double Belt	SPLIT Double Belt	SPLIT Double Arm, Double Belt
106	20	272 20	313 05	325 70	366 55
	22	296 05	340 50	366 05	410 50
	24	320 00	368 00	390 00	438 00
	26	343 85	395 40	413 85	465 40
	28	367 85	423 00	437 85	493 00
	30	391 85	450 65	461 85	520 65
	32	416 00	478 40	506 00	568 40
	34	440 10	506 10	530 10	596 10
	36	.....	533 85	.....	623 85
	38	.....	561 50	.....	651 50
	40	.....	589 25	.....	679 25
	42	.....	617 00	.....	732 00
	44	.....	644 75	.....	759 75
	46	.....	672 75	.....	787 75
	48	.....	700 60	.....	815 60
	50	.....	728 20	.....	843 20
	52	.....	755 55	.....	905 55
	54	.....	783 60	.....	933 60
	56	.....	811 75	.....	961 75
	58	.....	839 90	.....	989 90
	60	.....	868 15	.....	1018 15
108	8	144 35	.....	182 35	.....
	9	154 75	.....	192 75	.....
	10	165 35	.....	202 35	.....
	11	176 10	.....	214 10	.....
	12	187 00	.....	225 00	.....
	14	209 50	.....	247 50	.....
	16	232 50	.....	286 00	.....
	18	256 00	.....	309 50	.....
	20	280 20	322 25	333 70	375 75
	22	304 55	350 25	374 55	420 25
	24	329 00	378 35	399 00	448 35
	26	353 35	406 35	423 35	476 35
	28	377 80	434 45	447 80	504 45
	30	402 35	462 70	472 35	532 70
	32	427 00	491 05	517 00	581 05
	34	451 60	519 35	541 60	609 35
	36	.....	547 65	.....	637 65
	38	.....	575 90	.....	665 90
	40	.....	604 20	.....	694 20
	42	.....	632 55	.....	747 55
	44	.....	660 90	.....	775 90
	46	.....	689 40	.....	804 40
	48	.....	717 90	.....	832 90
	50	.....	746 45	.....	861 45
	52	.....	774 05	.....	924 05
	54	.....	802 70	.....	952 70
	56	.....	831 40	.....	981 40
108	58	.....	860 15	.....	1010 15
	60	.....	888 95	.....	1038 95
110	8	149 35	.....	187 35	.....
	9	160 05	.....	198 05	.....
	10	170 90	.....	208 90	.....
	11	181 90	.....	219 90	.....
	12	193 00	.....	231 00	.....
	14	215 80	.....	253 80	.....
	16	239 15	.....	292 65	.....
	18	263 00	.....	316 50	.....
	20	287 80	331 00	341 30	384 50
	22	312 85	359 95	382 85	429 95
	24	338 00	388 70	408 00	458 70
	26	363 00	417 40	433 00	487 40
	28	388 10	449 60	458 10	519 60
	30	413 30	475 30	483 30	545 30
	32	438 65	504 45	528 65	594 45
	34	463 90	533 55	553 90	623 55
	36	489 20	562 60	579 20	652 60
	38	.....	591 60	.....	681 60
	40	.....	620 70	.....	710 70
	42	.....	649 80	.....	764 80
	44	.....	678 95	.....	793 95
	46	.....	708 20	.....	823 20
	48	.....	737 45	.....	852 45
	50	.....	766 75	.....	881 75
	52	.....	795 45	.....	945 45
	54	.....	824 90	.....	974 90
	56	.....	854 35	.....	1004 35
	58	.....	883 55	.....	1033 55
	60	.....	913 75	.....	1063 75
112	8	154 40	.....	192 40	.....
	9	165 40	.....	203 40	.....
	10	176 45	.....	214 45	.....
	11	187 70	.....	225 70	.....
	12	199 00	.....	237 00	.....
	14	222 10	.....	260 10	.....
	16	245 80	.....	299 30	.....
	18	270 00	.....	323 50	.....
	20	295 40	339 75	348 90	393 25
	22	321 15	369 70	391 15	439 70
	24	347 00	399 05	417 00	469 05
	26	372 65	428 50	442 65	498 50
	28	398 40	464 80	468 40	534 80
	30	424 30	487 90	494 30	557 90
	32	450 30	517 85	540 30	607 85
	34	476 25	547 75	566 25	637 75

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

Diam.	Face	SOLID Double Belt	SOLID Double Arm, Double Belt	SPLIT Double Belt	SPLIT Double Arm, Double Belt
112	36	502 20	577 55	592 20	667 55
	38	528 10	607 35	618 10	697 35
	40	.....	637 20	.....	727 20
	42	.....	667 05	.....	782 05
	44	.....	697 00	.....	812 00
	46	.....	727 00	.....	842 00
	48	.....	757 00	.....	872 00
	50	.....	787 10	.....	892 10
	52	.....	816 90	.....	966 90
	54	.....	847 10	.....	997 10
	56	.....	877 30	.....	1027 30
	58	.....	907 60	.....	1057 60
	60	.....	938 60	.....	1088 60
114	12	205 00	.....	243 00	.....
	14	228 40	.....	266 40	.....
	16	252 45	.....	305 95	.....
	18	277 00	.....	330 50	.....
	20	303 00	348 50	356 50	402 00
	22	329 50	379 40	399 50	449 40
	24	356 00	409 40	426 00	479 40
	26	382 30	439 60	452 30	509 60
	28	408 70	470 00	478 70	540 00
	30	435 30	500 60	505 30	570 60
	32	462 00	531 30	552 00	621 30
	34	488 60	562 00	578 60	652 00
	36	515 20	592 50	605 20	682 50
	38	541 80	623 10	631 80	713 10
	40	.....	653 70	.....	743 70
	42	.....	684 35	.....	799 35
	44	.....	715 05	.....	830 05
	46	.....	745 80	.....	860 80
	48	.....	776 60	.....	891 60
	50	.....	807 45	.....	922 45
	52	.....	838 35	.....	988 35
	54	.....	869 30	.....	1019 30
	56	.....	900 30	.....	1050 30
	58	.....	931 35	.....	1081 35
	60	.....	962 45	.....	1112 45
116	12	210 30	.....	248 30	.....
	14	234 30	.....	272 30	.....
	16	258 85	.....	312 35	.....
	18	284 00	.....	337 50	.....
	20	310 60	357 25	364 10	410 75
	22	337 60	388 55	407 60	458 55
	24	364 80	419 55	434 80	489 55
	26	391 80	450 85	461 80	520 85
	28	418 85	481 70	488 85	551 70

Diam.	Face	SOLID Double Belt	SOLID Double Arm, Double Belt	SPLIT Double Belt	SPLIT Double Arm, Double Belt
116	30	446 05	512 95	516 05	582 95
	32	473 30	544 30	563 30	634 30
	34	500 50	575 70	590 50	665 70
	36	527 70	606 90	617 70	696 90
	38	554 90	638 20	644 90	728 20
	40	.....	669 45	.....	759 45
	42	.....	700 75	.....	815 75
	44	.....	732 15	.....	847 15
	46	.....	763 55	.....	878 55
	48	.....	795 00	.....	910 00
	50	.....	826 55	.....	941 55
	52	.....	858 10	.....	1008 10
	54	.....	889 70	.....	1039 70
	56	.....	921 40	.....	1071 40
	58	.....	952 75	.....	1102 75
	60	.....	984 85	.....	1134 85
118	12	215 65	.....	253 65	.....
	14	240 20	.....	278 20	.....
	16	265 25	.....	318 75	.....
	18	291 00	.....	344 50	.....
	20	318 25	366 00	371 75	419 50
	22	345 70	397 70	415 70	467 70
	24	373 65	429 70	443 65	499 70
	26	401 30	462 10	471 30	532 10
	28	429 00	493 40	499 00	563 40
	30	456 80	524 35	526 80	594 35
	32	484 85	557 35	574 85	647 35
	34	512 45	589 40	602 45	679 40
	36	540 20	621 30	630 20	711 30
	38	568 05	653 30	658 05	743 30
	40	.....	685 20	.....	775 20
	42	.....	717 20	.....	832 20
	44	.....	749 25	.....	864 25
	46	.....	781 30	.....	896 30
	48	.....	813 40	.....	928 40
	50	.....	845 65	.....	960 65
	52	.....	877 85	.....	1027 85
	54	.....	910 15	.....	1060 15
	56	.....	942 50	.....	1092 50
	58	.....	974 20	.....	1124 20
	60	.....	1007 30	.....	1157 30
120	12	221 00	.....	259 00	.....
	14	246 10	.....	284 10	.....
	16	271 75	.....	325 25	.....
	18	298 00	.....	351 50	.....
	20	325 90	374 80	379 40	428 30
	22	353 80	406 90	423 80	476 90

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

Diam.	Face	SOLID Double Belt	SOLID Double Arm, Double Belt	SPLIT Double Belt	SPLIT Double Arm, Double Belt
120	24	382 50	439 90	452 50	509 90
	26	410 80	473 40	480 80	543 40
	28	439 20	505 10	509 20	575 10
	30	467 60	537 75	537 60	607 75
	32	496 00	570 40	586 00	660 40
	34	524 40	603 10	614 40	693 10
	36	552 80	635 70	642 80	725 70
	38	581 20	668 40	671 20	758 40
	40	.....	701 00	.....	791 00
	42	.....	733 65	.....	848 65
	44	.....	766 35	.....	881 35
	46	.....	799 10	.....	904 10
	48	.....	831 90	.....	946 90
	50	.....	864 75	.....	979 75
	52	.....	897 65	.....	1047 65
	54	.....	930 60	.....	1080 60
	56	.....	963 60	.....	1113 60
	58	.....	996 65	.....	1146 65
	60	.....	1029 75	.....	1179 75
126	10	212 00	.....	264 10	.....
	11	224 90	.....	276 90	.....
	12	238 00	.....	290 00	.....
	14	264 30	.....	316 30	.....
	16	291 10	.....	363 10	.....
	18	319 00	.....	391 00	.....
	20	349 00	401 30	421 00	473 30
	22	380 30	437 80	476 30	533 80
	24	409 25	470 60	505 25	566 60
	26	433 40	486 90	529 40	582 90
	28	469 75	541 20	565 75	637 20
	30	495 00	569 25	591 00	665 25
	32	530 50	610 10	654 50	734 10
	34	561 00	645 10	685 00	769 10
	36	591 40	680 10	715 40	804 10
	38	621 80	715 10	745 80	839 10
	40	.....	750 10	.....	874 10
	42	.....	783 00	.....	958 00
	48	.....	881 00	.....	1056 00
	54	.....	992 00	.....	1217 00
	60	.....	1098 00	.....	1323 00
132	10	227 60	.....	279 60	.....
	11	241 10	.....	293 10	.....
	12	255 00	.....	307 00	.....
	14	282 50	.....	334 50	.....
	16	310 50	.....	382 50	.....
	18	340 00	.....	412 00	.....
	20	372 00	427 80	444 00	499 80

Diam.	Face	SOLID Double Belt	SOLID Double Arm, Double Belt	SPLIT Double Belt	SPLIT Double Arm, Double Belt
132	22	404 00	464 60	500 00	560 60
	24	436 00	501 40	532 00	597 40
	26	468 00	538 20	564 00	634 20
	28	500 30	575 30	596 30	671 30
	30	532 50	612 50	628 50	708 50
	32	565 00	649 75	689 00	773 75
	34	597 50	687 10	721 50	811 10
	36	630 00	725 50	754 00	849 50
	38	662 50	761 90	786 50	885 90
	40	.....	799 25	.....	923 25
	42	.....	833 00	.....	1008 00
	48	.....	937 00	.....	1112 00
	54	.....	1054 00	.....	1279 00
	60	.....	1166 00	.....	1391 00
138	10	243 60	.....	295 60	.....
	11	257 60	.....	309 60	.....
	12	272 00	.....	324 00	.....
	14	300 25	.....	352 25	.....
	16	329 75	.....	401 75	.....
	18	361 00	.....	433 00	.....
	20	395 00	454 25	467 00	526 25
	22	429 00	493 40	525 00	589 40
	24	463 00	533 50	559 00	629 50
	26	497 00	571 60	593 00	667 60
	28	531 20	610 90	627 20	706 90
	30	565 20	650 00	661 20	746 00
	32	599 50	689 40	723 50	813 40
	34	633 75	728 80	757 75	852 80
	36	668 00	768 20	792 00	892 20
	38	702 25	807 60	826 25	931 60
	40	.....	847 00	.....	971 00
	42	.....	883 00	.....	1058 00
	48	.....	993 00	.....	1168 00
	54	.....	1116 00	.....	1341 00
	60	.....	1234 00	.....	1459 00
144	10	259 50	.....	311 50	.....
	11	274 10	.....	326 10	.....
	12	289 00	.....	341 00	.....
	14	318 00	.....	370 00	.....
	16	349 00	.....	421 00	.....
	18	382 00	.....	454 00	.....
	20	418 00	480 70	490 00	552 70
	22	454 00	522 10	550 00	618 10
	24	490 00	563 50	586 00	659 50
	26	526 00	604 90	622 00	700 90
	28	562 00	646 30	658 00	742 30
	30	598 00	687 70	694 00	783 70

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

SOLID AND SPLIT IRON PULLEYS—Continued.

Diam	Face	SOLID Double Belt	SOLID Double Arm, Double Belt	SPLIT Double Belt	SPLIT Double Arm, Double Belt	Diam	Face	SOLID Double Belt	SOLID Double Arm, Double Belt	SPLIT Double Belt	SPLIT Double Arm, Double Belt
144	32	634 00	729 10	758 00	853 10	144	42	.....	933 00	.....	1108 00
	34	670 00	770 50	794 00	894 50		48	.....	1049 00	.....	1224 00
	36	706 00	811 90	830 00	935 90		54	.....	1178 00	.....	1403 00
	38	742 00	853 30	866 00	977 30		60	.....	1302 00	.....	1527 00
	40	.....	894 70	.....	1018 70						

For Clamp Hub Pulley List (split hub, solid rim), add one-half the difference between the lists of Solid and Split Pulleys to that of the Solid Pulley.

For list price of Pulleys of fractional diameter, use list of next larger diameter given.

Additional Price to be added to the List Price for Tight and Loose Pulleys, per pair, and Finished Flanged Pulleys, each.

Diameter in Inches	Price Tight and Loose Pulleys	Price Flanged Pulleys	Diameter in Inches	Price Tight and Loose Pulleys	Price Flanged Pulleys
6 to 8	$1 60	$ 4 65	49 to 52	$ 9 30	$ 33 00
9 to 10	1 95	5 20	53 to 56	10 00	36 30
11 to 12	2 30	5 75	57 to 60	10 70	40 70
13 to 14	2 65	6 30	61 to 66	11 70	46 20
15 to 16	3 00	7 15	67 to 72	12 70	51 70
17 to 18	3 30	8 00	73 to 78	13 70	57 20
19 to 20	3 70	8 80	79 to 84	14 70	62 70
21 to 22	4 05	9 90	85 to 90	15 70	68 20
23 to 24	4 40	11 00	91 to 96	16 70	73 70
25 to 26	4 75	12 10	97 to 102	17 70	79 70
27 to 28	5 10	13 75	103 to 108	18 70	85 80
29 to 30	5 45	15 40	109 to 114	19 70	91 30
31 to 32	5 80	17 05	115 to 120	20 70	96 80
33 to 34	6 15	18 70	121 to 126	21 70	102 30
35 to 36	6 50	20 35	127 to 132	22 70	107 80
37 to 40	7 20	23 10	133 to 138	23 70	113 80
41 to 44	7 90	26 40	139 to 144	24 70	119 80
45 to 48	8 60	29 70			

Pulleys with one flange only one-half that given above.

Pulleys with three flanges one-half more than given above.

We are prepared to furnish Iron Friction Wheels, Winding Drums, Pulleys for special purposes, etc., on short notice and at reasonable prices.

Driving pulleys for shifting belts should have a straight face.

Tight and loose pulleys should have crowning faces.

An extra charge will be made if the bore of pulleys without bushes is of special diameter or large in comparison with the size of the pulley, or if pulley is both key-seated and set-screwed.

For list price of pulleys of fractional diameter, use list of next larger diameter given.

If pulley is not regular, make sketch showing exact dimensions of special features.

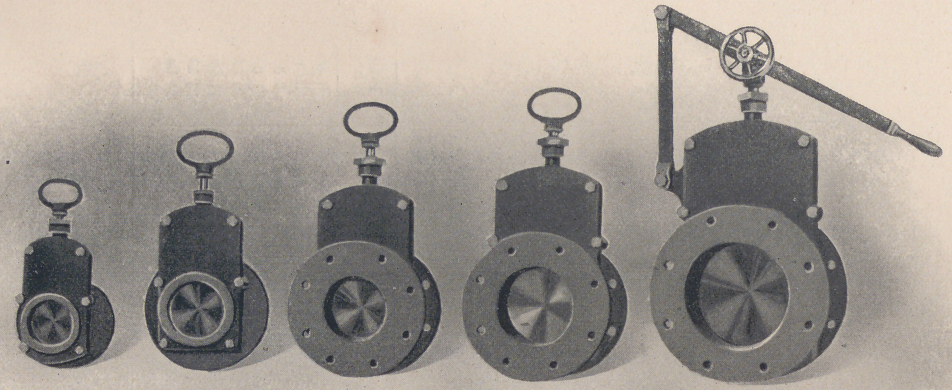
If key-seat is not specified, set-screws only will be furnished except in large pulleys.

When key-ways are wanted, specify whether straight or taper, and if taper, how much and whether set-screw on key. If not standard key-way give measurement.

THE BAGLEY & SEWALL COMPANY SAFETY COLLARS.

PRICE LIST
THE BAGLEY & SEWALL COMPANY WHOLE AND SPLIT SAFETY COLLARS.

Diameter Shaft	Width	Price Whole	Price Split Patent	Diameter Shaft	Width	Price Whole	Price Split Patent
1 7/16	1 1/16	1 50	1 60	3 11/16	1 9/16	5 00	5 25
1 11/16	1 3/16	1 75	1 85	3 15/16	1 5/8	5 50	5 75
1 15/16	1 3/16	2 00	2 10	4 7/16	1 3/4	6 00	7 05
2 3/16	1 3/16	2 25	2 40	5	1 7/8	7 00	8 85
2 7/16	1 1/4	2 50	2 70	5 1/2	1 7/8	9 00	10 55
2 11/16	1 1/4	3 00	3 15	6	2	11 00	12 63
2 15/16	1 1/2	3 50	3 60	6 1/2	2 1/4	13 50	14 86
3 3/16	1 1/2	4 00	4 25	7	2 3/8	15 00	17 94
3 7/16	1 9/16	4 50	4 75				



Gate Valve for Water, Pulp and Stock in Pulp and Paper Mills.
Designed and Built by The Bagley and Sewall Company.

GATE VALVES.

The gates and stems in these valves are of bronze. Eight inch valves have lever operating handles. Flanges are regular size and drilled for standard iron pipe.

Cut on previous page.

	2″	2½″	3″	3½″	4″	5″	6″	8″
Iron	4.00	4.50	5.25	6.00	6.50	7.50	10.00	20.00
Brass	6.00	7.00	8.00	9.00	12.00	16.00	23.50	43.50

VAT WORK.

Forming vats for cylinder moulds of paper machines and for wood pulp and sulphite wet machines of improved design, built at reasonable prices, of first class materials and workmanship.

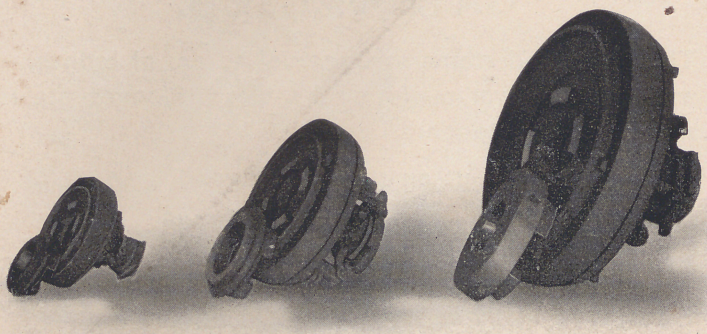
Making vat to designs of our customers is a specialty with us.

FLOW BOXES.

Flow boxes for the head of paper machines, of improved designs for economy of space and proper control and circulation of the stock, built on order. We have these boxes with one, two and three gates.

FRICTION CLUTCHES

Of most modern type with special improvements adapted to Paper and Pulp Mills.



PRICE LIST

OF FRICTION CLUTCHES, BORED AND KEYSEATED, READY TO ATTACH TO PULLEY OR OTHER HUB.

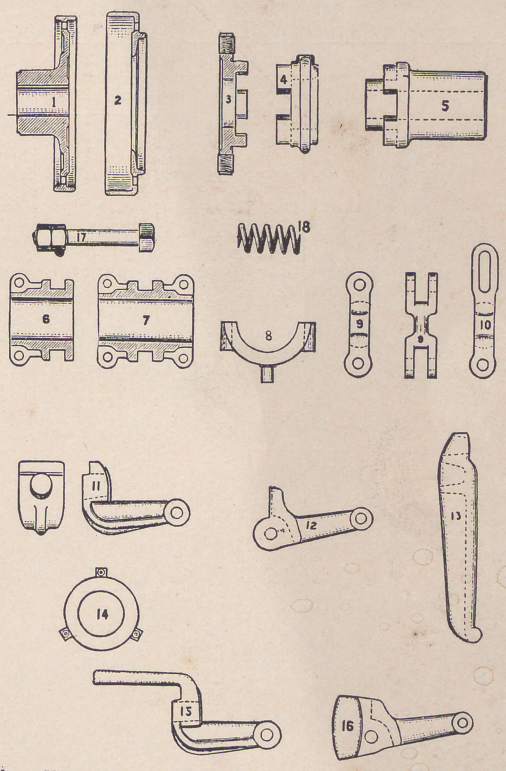
Size	Price	Outside Diameter	Space required including movement	Largest Bore	Will drive pulley as large as		Capacity at 100 R. P. M.	Weight
					Diam.	Face		
Inches	Dollars	Inches	Inches	Inches	Inches		H. P.	Pounds
8	20.00	11	$6\frac{7}{8}$	$2\frac{7}{16}$	18	5	5	46
10	27.00	13	$8\frac{1}{4}$	$2\frac{15}{16}$	21	6	7	76
12	36.00	$15\frac{1}{2}$	$10\frac{1}{4}$	$3\frac{15}{16}$	27	8	12	142
14	48.00	18	$12\frac{1}{2}$	$4\frac{7}{16}$	32	10	18	215
16	60.00	$20\frac{1}{4}$	13	$4\frac{15}{16}$	35	12	25	255
18	75.00	$22\frac{1}{4}$	$13\frac{1}{4}$	$5\frac{15}{16}$	42	14	34	351
20	95.00	$25\frac{1}{2}$	$16\frac{1}{4}$	$5\frac{15}{16}$	50	16	45	544
24	150.00	$29\frac{3}{4}$	17	$6\frac{7}{16}$	60	18	65	810
28	180.00	34	$19\frac{1}{2}$	$7\frac{15}{16}$	66	22	85	1050

Discount per cent.

List of repair parts on next page.

FRICTION CLUTCH PARTS.

Order by number indicated on part,
also by name of part.



No. 1—Hub.
2—Follower.
3—Disc.
4—Clutch Collar.
5—Cut-Off Sleeve.
6—Spool.
7—Duplex Spool.
8—Thrust Collar.
9—Link.
No. 10—Duplex Link.
11—Lever.
12—Compound Lever (angle)
13—Compound Lever (straight)
14—Centre Plate for Double Disc Clutch.
15—Balanced Lever.
16—Balanced Compound Lever.
17—Draw Bolt.
18—Spring.

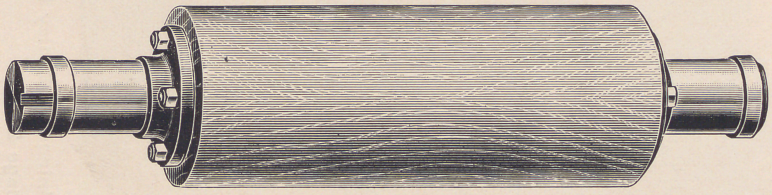
Prices on next page.

PRICE LIST CLUTCH PARTS.

No.	NAME OF PART	SIZE									
		6″	8″	10″	12″	14″	16″	18″	20″	24″	28″
1	HUB	1.50	2.00	3.50	4.75	7.00	8.50	10.00	12.00	17.50	22.50
2	FOLLOWER	.75	1 00	1.75	2.75	3.75	4.50	5.50	7.00	8.50	10.00
3	DISC (Wood Filled)	1.50	1.75	2.25	3.25	4.50	5.25	6.25	8.00	10.50	13 00
4	CLUTCH COLLAR	1.00	1.25	1.70	2.00	3.00	3.75	4.50	6.00	7.50	8.50
5	CUT-OFF SLEEVE	4.00	4.50	6.00	7.50	9.00	11.00	14.00	16.00	22.50	26 00
6	SPOOL	.75	.80	1.50	1.75	2.25	3.00	3.75	4.50	5.25	6.00
7	DUPLEX SPOOL	1.13	1.20	2.25	2 63	3.38	4.50	5.63	6.75	7.88	9.00
8	THRUST COLLAR	.30	.40	.50	.60	.70	1.50	1.75	2.25	2.75	3 25
9	LINK	.15	.25	.25	.30	.40	.40	.50	.50	.50	.50
10	DUPLEX LINK	.15	.25	.25	.25	.40	.40	.50	.50	.50	.50
11	LEVER	.15	.25	.25	.30	.40	.40	50	.50	50	.50
12	COMPOUND LEVER—Angle	.15	.25	.25	.25	.40	.40	.50	.50	.50	.50
13	COMPOUND LEVER-Straight	.15	.25	.25	.25	.40	.40	.50	.50	.50	.50
14	CENTER PLATE										
15	BALANCED LEVER	.15	.25	.25	.25	.40	.40	.50	.50	.50	.50
16	BAL. COMP. LEVER	.15	.25	.25	.25	.40	.40	.50	.50	.50	.50
17	DRAW BOLT										
18	SPRING	.10	.10	.10	.10	10	.15	.15	.15	.15	.15
	WOOD FILLING	.25	.30	.40	.50	.60	.75	.90	1.00	1.50	1.75
	SPOOL WITH THRUST COLLAR, LINKS AND LEVERS	2.00	2.50	3.00	3.75	5.00	6.00	7 50	9 00	12.00	13 50
	3 SPECIAL SOLID IRON DISCS, NO FILLING	4.50	4.75	5.25	6.25	7 50	8 25	9.25	11.00	13.50	16.00

MAPLE PRESS ROLLS.

The limestone soil of our vicinity produces Hard Maple of extraordinarily good quality, and especially well adapted for Press Rolls. These are coming to be more widely used, as their excellence becomes known. The texture of the wood is sufficiently firm to resist wear and retain the shape of the Roll, while its action is particularly easy on the Felt, and the surface of the Roll acquires a peculiarly smooth quality which the paper sheet leaves readily.



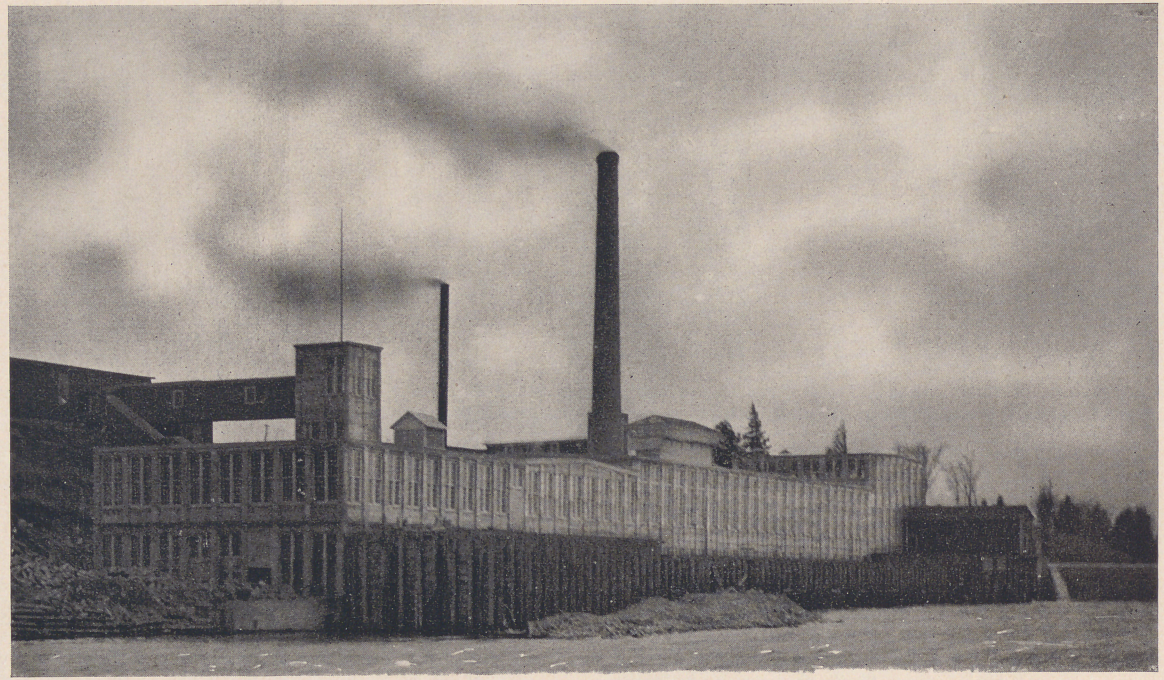
Hard Maple Press Rolls.

We are prepared to furnish these Rolls complete, as shown in cut, of any desired length, and of diameters from 17 to 26 inches. We ship these securely boxed and packed in wet shavings, to prevent checking before being put into service. Thus packed, we have shipped them to foreign countries without injury.

In the last few years trade in our special maple logs has grown enormously. We ship them into every state in the Union, to England, Sweden, Germany, France, Japan, and even into the various mills in Canada, simply because the quality of our maple is such that it glazes over and paper will not stick to same, and for use in the first press it is invaluable.

We make a specialty of furnishing new centers to fit the heads and rods which are taken from worn-out wooden rolls. All we need is a sketch giving the face and the distance between the shoulders. Prices on these rolls are as moderate as can be made, giving the close inspection and careful selection that we do.

We are also prepared to furnish Press Rolls Bronze Jacketed, Rubber Covered, Gray Iron or Chilled Iron.



Mill of Raymondville Paper Co. containing two Bagley Fourdrinier News Machines.
(See page 22).

SPECIAL WORK.

We have included in this catalog the regular lines we manufacture but we are prepared to build any style or design of special machinery for the manufacture of paper and pulp, and solicit such work.

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